

BOUND
BY J. SMITH,
MAIDSTONE.

The
(Botanic Garden.)

Consisting of

Eighty finished Representations

OF HARDY

ORNAMENTAL FLOWERING

(PLANTS.)

CULTIVATED IN GREAT BRITAIN,
WITH

Their Classification, History, Culture,

(AND)

OTHER INTERESTING INFORMATION.

BY

B. MAUND, F.L.S.

Vol.



LONDON

SIMPKIN AND MARSHALL, STATIONERS HALL COURT,
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THE
BOTANIC GARDEN;

CONSISTING OF
HIGHLY FINISHED REPRESENTATIONS
OF HARDY
ORNAMENTAL FLOWERING PLANTS,
CULTIVATED
IN GREAT BRITAIN;
WITH
THEIR NAMES, CLASSES, ORDERS, HISTORY, QUALITIES, CULTURE,
AND PHYSIOLOGICAL OBSERVATIONS.

BY

B. MAUND, F. L. S.

VOL. IX.

“Not a tree,
A plant, a leaf, a blossom, but contains
A folio volume. We may read and read,
And read again, and still find something new,
Something to please and something to instruct.”

HURDIS.

London;

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P R E F A C E.

THE completion of another volume affords us the gratifying opportunity of again addressing our readers, in closer conference than is practicable on other occasions. They must have observed (though we allude reluctantly to our own doings) that every manifestation of favour towards our work, as it proceeded on its now lengthened course, has stimulated us to fresh efforts; not only to retain, but to merit an increased measure of their patronage. To the descriptions of the plants figured, with which the work started, there has been added, the "AUCTARIUM," in order that every thing connected with gardening, which seemed likely to interest the subscribers, or enable them to cultivate every department of it more successfully, should be regularly chronicled, without interfering with, or overcharging, the descriptions.

At a subsequent period, the "FLORAL REGISTER," was added, that the readers of the BOTANIC GARDEN, may have information, every month, of all such newly-introduced plants as are interesting, which either come under our own notice, or have been introduced to public attention by respectable authors. This feature is sufficiently prominent and intelligible to render further comment unnecessary.

Our Monthly Calendar has, too, and still will, we trust, spread much original information, founded wholly on practice. We speak with confidence on this point, inasmuch as it contains numerous valuable hints, for which we are indebted to one of the most talented practical cultivators of the day — the assiduous Curator of the Birmingham Horticultural Society's garden, Mr. David Cameron.

We would now desire to direct further attention to the future; and here we are happy to announce that we are enabled to present to the subscribers to the Botanic Garden, a portion, in every successive number, till completed, of Professor HENSLow's Botanical Dictionary. Of the value and excellence of this production it is superfluous to speak.

Another topic presents itself, on which we willingly discourse. The progress of British conquests and commercial treaties, promise us access to a region replete with vegetable riches, To China we look with anxious expectation, seeing that it possesses such variety of climate. The productions of the southern parts of China are unsuitable for the open garden in this country; but the vast inland, stretching many degrees towards the north, displays an almost exhaustless field, whence to obtain a rich and varied harvest of hardy plants, and it is these that are the sterling prizes of both the cultured garden and wide domain.

In the more northern inland regions of the Chinese empire, snow lies for a considerable portion of the year; the rivers are frozen for months together, and the mean annual temperature, even at Pekin, is 9° lower than that of Naples, owing chiefly to the prolonged dry or winter season. So thoroughly are our horticultural societies, nobility, and nurserymen, impressed with the conviction of the value of this unexplored portion of the Chinese empire, that they are already preparing to dispatch Collectors to penetrate it, for the purpose of selecting from its riches. The results of their zeal and exertions we intend to bring regularly before our readers. They will be delightful as the trophies of peace—more welcome than the amplest tributes of war. They soften and harmonize, by presenting an indissoluble union of affection and natural piety. For, to use the words of Miss Twamley, in her beauteous volume, "The Romance of Nature,"

"What so fair,

So pure, so holy, as their fragile forms?
Earth's loveliest offspring, whom the mighty sun
Looks on with smiles, and whom the careful sky
Nourishes with soft rain, and whom the dew
Delights to deck with her enclustered gems,
Which each, reflecting the soft tint it lights,
Gains, while it gives, new beauty."

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75



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RHODODEN'DRON MYRTIFO'LIUM.

MYRTLE-LEAVED RHODODENDRON.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Gibraltar.	12 feet.	May & June.	Perennial.	in 1763.

No. 769.

The Greek words RHODON rose, DENDRON tree, were, doubtless, united for a name as a mark of honourable distinction in favour of the Rhododendron.

As well as undesirable it would be very difficult to stir the deeply-rooted prejudice in favour of the universally admired Rose, otherwise in respect to splendour of appearance, it might be shown that some varieties of the Rhododendron are not inferior to the Rose itself, therefore could receive but little honour by borrowing from its name.

Although elevated to the distinction of a species, this plant is probably one of the numerous progeny of Rhododendron Ponticum. It is, however, very distinct in general habit from the original species, and unlike the boundless number of seedlings raised from Ponticum in this country. It has long been known as a plant originally brought from Gibraltar

This is as hardy as any of the genus, and makes a compact and handsome bush. Should be kept in peat and loam or a very sandy soil. May be readily propagated by layers, which will root in twelve months.

TRADESCANTIA SPICATA.

SPIKED SPIDERWORT.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
COMMELINACEÆ.

Native of Mexico.	Height. 3½ feet.	Flowers in September.	Duration. Perennial.	Introduced in 1837.
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No. 770.

John Tradescant, after whom this genus was named, is reported to have been a Dutchman by birth. At what period he came to England is not recorded, but it is mentioned in Dr. Poulteney's Sketches that he obtained the title of Gardener to Charles I, about the year 1629. There are but few men who have possessed the ardent love of science which characterized the life of Tradescant. He travelled to various parts of Europe, Africa, and the islands of the Mediterranean, collecting not plants alone, but a variety of productions both of nature and art. Parkinson, in his notice of the Tradescantia Virginica (Paradisus Terrestris, 152) says "This Spiderwort is of late knowledge, and for it the christian world is indebted much to that painful industrious searcher and lover of all nature's varieties, John Tradescant, who hath imparted hereof, as of many other things, both to me and others." He had a garden at Lambeth, and there also was his Museum, the first general collection of the works of nature and art which had ever been made in this country—it was the curiosity of the age, and both visited and enriched by royalty and

the chief virtuosi of Great Britain. This museum or Tradescant's Ark, as it was called, descended to his son John, who also travelled, and added to its numerous objects of interest, and when he died bequeathed the whole to Mr. Ashmole. This latter gentleman presented it, together with coins, medals, and manuscripts of his own, to the University of Oxford, on condition that a building should be erected for their reception, which was executed about the year 1682, by Sir Christopher Wren. Thus was founded the Ashmolean Museum, which Mr. Ashmole further enriched at his death, by a bequest thereto of his antiquarian library.

This museum has been further enriched by the liberality of many individuals, and is at the present time obtaining more attention than has fallen to its lot during the last century.

This newly-introduced plant, which bears the name of the celebrated man above noticed, was imported into this country, by G. Barker, Esq. of Springfield, near Birmingham; and named by Messrs. Knowles and Westcott, who published it in the Floral Cabinet. 'It appears' says Mr. Cameron, 'to be perfectly hardy, but still' he observes, 'it would be advisable to keep a duplicate plant in a cold frame.' Its spikes of numerous flowers, branching out from the main stem, and not overshadowed by foliage, have a pretty effect in the borders.

It will grow in any common garden soil, and might be increased by cuttings of the young suckers sent up from the root during summer; and also by dividing its fasciated tubers in spring.

HYPERICUM URA'LUM.

URAL ST. JOHN'S WORT.

Class.
POLYADELPHIA.

Order.
POLYANDRIA.

Natural Order.
HYPERICACEÆ.

Native of Nepal.	Height. 1 foot.	Flowers in June, July.	Duration. Perennial.	Introduced in 1823.
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No. 771.

The generic name, *Hypericum*, has come to us from the Greek language, but its meaning is doubtful, see No. 630. The specific name of the present plant, *Uralum*, was adopted as indicative of its native country. The Ural mountains form an immense range, dividing Europe from Asia.

Hypericum Uralum is said to have been introduced in 1823, but if so, was probably lost again, or at the least, must have been exceedingly rare since that time. The plant from which our drawing was executed, was raised in the Birmingham Horticultural Society's Garden, from Himalayan seeds, received from Dr. Royle, in the spring of 1839. In 1840, it flowered in the open borders, having been kept, during winter, in a frame, which, probably it did not require. We received other specimens from the Royal Botanical Gardens of Edinburgh, which had also been raised from foreign seeds.

The *Hypericum Uralum* is a showy and most desirable small shrub. It may be propagated from cuttings of the young wood, which will strike root in sand

Don's Syst Bot. 1, 603.

CAMPAN'ULA MACRAN'THA.

LONG-FLOWERED BELL-FLOWER.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
CAMPANULACEÆ.

Native of Russia.	Height. 3 feet.	Flowers in June, July.	Duration. Perennial.	Introduced in 1822.?
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No. 772.

The generic name, *Campanula*, accords so perfectly with the generality of the flowers of the genus, that when the Latin word *campana*, a bell, is mentioned, its application needs no further comment. *Macrantha*, the specific name, is deduced from the Greek *makros* long, *anthos* flower; and it may very justly be applied to this species as the largest flowered in the genus.

This is a family of splendid herbaceous subjects, whether considered with regard to its gaiety or extent. The handsome pendant bells of some or other of its plants are known to every body; and its number of species exceed a hundred and fifty. Whether six feet high, or but a few inches, for they may be found of these and all intermediate heights, they possess the characteristic gaiety of the genus. The beautiful *Campanula rotundifolia* and *patula* of the road banks, hang out their light and airy bells, as if to ask the admiration of the passing traveller.

Campanula macrantha is perfectly hardy, will grow in any common soil or situation; and may be increased by division of its roots in spring or autumn.



Geum montanum

79



Sedum azureum



Astragalus virgatus

79



Papaver comutatum

79

GE'UM MONTA'NUM.

MOUNTAIN GEUM.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
ROSACEÆ.

Native of	Height.	Flowers in	Duration.	Cultivated
Austria.	15 inches	May, Sept.	Perenn'ial.	in 1597.

No. 773.

The meaning of the name of this genus has been guessed at rather than ascertained. The Greek *GEYO*, signifying to taste well, is supposed to be its root. If, however, this be correct, the Greeks must have applied it to a class of plants very different from that which now bears the name. This is the *Sieversia montana* of most modern works, having obtained the distinction of a separate genus from its feathery style.

This is a remarkably handsome and bold flowering plant, and continues long in beauty; but it should be observed that there are two varieties of it, the one being altogether smaller than the other, so much so as to be comparatively of little worth.

The large variety of this plant will class admirably with the several gay *Potentillas* of modern introduction, and without disadvantage from the comparison. It may be planted in the borders or on rock-work, and requires no peculiarity of soil or management. Increase may be obtained by division of its roots; or, it may be raised from seeds, which are ripened in abundance; and should be sown in the spring.

SE'DUM CÆRU'LEUM.

PURPLE STONECROP.

Class.
DECANDRIA.

Order.
PENTAGYNIA.

Natural Order.
CRASSULACEÆ.

Native of Africa.	Height. 3 inches.	Flowers in July, Aug.	Duration. Perennial.	Introduced in 1822.
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No. 774.

This name is deduced from the Latin sedere, in allusion to its sitting closely on walls, or other places of its growth.

Annual Sedums are rarely met with in cultivation, and this is so pretty a plant, especially for rock-work, mounds, and the fronts of borders, that we hope to see it more generally introduced to the British parterre. It continues a long time in flower, but sometimes from the dampness of our seasons, it does not ripen its seeds. If, however, a demand arise for the seed, the attention of the continental seedsmen would not permit us to continue in want of that which they could so readily supply. Steam is now-a-days looked upon as the great propelling power, but steam is comparatively inert when compared with that moving principle—money. The former drives along gross matter, but the latter operates on men's minds and keeps the whole world in active motion.

Like the whole tribe of succulents, this plant delights in a dry sandy soil, and a warm aspect. If it be sown early in April it will be very ornamental through the latter part of summer.

ASTRA'GALUS VIRGA'TUS.

TWIGGY MILK VETCH.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Siberia.	Height. 3 feet.	Flowers in May, Aug.	Duration. Perennial.	Introduced in 1806.
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No. 775.

Of the various meanings given to the word *Astragalus*, that of the Greeks which refers to the vertebræ of the back or neck, seems to be the most applicable to the plant. The articulated appearance of the pods of some of the genus is not unlike that of the vertebral column of some animals.

This is a pretty upright suffruticose plant, which is mentioned as having been introduced to this country as early as 1806. That from which our drawing was made, was, however, raised in the Birmingham Horticultural Society's Garden, from Russian seeds, in 1838.

Its natural habitat—Siberia, would indicate its perfect hardiness in our climate; notwithstanding this it demands a little protection in severe weather, although it is, perhaps, damp instead of intense cold by which it suffers. If it be protected in a frame during winter, and turned into the open ground early in May, it will blossom gaily during the months of August and September; after which it should be potted again in sandy soil, to receive winter protection. Increased by cuttings, and slowly by division of its roots.

PAPA'VER COMMUTA'TUM.

CHANGEABLE POPPY.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
PAPAVERACEÆ.

Native of Iberia.	Height. 1 foot.	Flowers in September.	Duration. Annual.	Introduced in 1839.
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No. 776.

The word Papaver, it is generally believed, arose out of the Celtic PAPA, pap, or thickened milk, on account of the juice of the Poppy being used in children's food to make them sleep. Or, more directly, the milky juice itself of the Poppy may have obtained for it the appellation, independently of any consideration of its uses. Inconstancy of colour, is natural to several allied species.

The first mention we have of the Papaver commutatum is in the Petersburg Seed List, drawn up by Fischer and Meyer, for 1837, where it occurs under the name we have adopted. It is, however, believed by C. A. Meyer to be a variety of Papaver rhœas. Be this as it may it is a showy annual, sent from the Botanic Garden of Berlin. It requires but to be sown in April, in a light soil, and it will flower in August and September.

The heads or capsules of the Papaver rhœas, or common Corn Poppy, contain a milky fluid similar to that produced by the Papaver somniferum, but of inferior strength when formed into Opium; and from its bright scarlet blossoms a medicine, known as the Syrupus rhœados, is prepared, simply by

infusing the petals in hot water, and then straining them out, and adding sugar to form a syrup. This has been used as a pectoral and anodyne, but its virtues are very limited; its use in the hands of the medical practitioner is chiefly confined to its quality as a colouring ingredient.

Opium, the produce of the *Papaver somniferum*, or White Poppy, has of late been not merely an important medicine, but one in which has originated the quarrel of empires. The introduction of this drug to China, contrary to the laws of that country, has for many years been tolerated, and the consumption of it increased by the Chinese to a fearful extent—not less than ten-fold within the last twenty-one years. The quantity illicitly imported, in 1837, amounted in value to twenty millions of dollars, a circumstance that may well arouse the anger of any government

Intoxication was a sin of the earliest ages, and as a demon of darkness it still haunts humanity; well may Shakspeare make Cassio exclaim

“O that men should put an enemy into their mouths
to steal away their brain! that we should with joy, revel,
pleasure, and applause, transform ourselves into beasts.”

Mahomet saw in the eastern nations the baleful effects of wine, and therefore forbade its use; his followers, to compensate themselves, had recourse to Opium. Whether any prophet or prejudice has stepped in to the assistance of human frailty in China we know not; it is, however a little remarkable that whilst the Turk indulges himself by eating his portion of the narcotic drug, the Chinese does the same by smoking it.





Penstemon barbatus.

70



Scutellaria Japonica.



Ismelia Maderensis.

75



Erica Mackayana

PENTSTEMON BARBATUM.

Var. Mexicana.

BEARDED PENTSTEMON.

Class.

DIDYNAMIA.

Order.

ANGIOSPERMIA.

Natural Order.

SCROPHULARIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Mexico.	6 feet.	July, Aug.	Perennial.	in 1838.

No. 777.

Some of our readers, it may be confidently presumed, have been puzzled in their attempts to distinguish *Pentstemon* from *Chelone*. It could not be otherwise, since botanical writers were not agreed either on their characters or the propriety of their separation.

Their characters, as determined by Mr. Bentham, are sufficiently distinct, still it cannot be forgotten by the public that a sacrifice of convenience is made whenever a change of nomenclature is adopted. Dr. Lindley in the *Botanical Register*, (21, 1839) doubtless felt this, and has the following observation on the subject, under his description of our present species. "It may appear necessary to offer some explanation of having changed the name of this plant from *Chelone* to *Pentstemon*. These two genera have been divided by the former having woolly anthers, and the latter smooth ones; and supposing that this were really the essential distinction between them, the subject of this notice would belong to *Pentstemon*. Others have distinguished the genera by the form of the flower, ascribing to *Chelone* a corolla short, inflated and

contracted at the orifice, with winged seeds ; and to *Pentstemon* a funnel-shaped corolla, with angular seeds. In this view of the subject the latter would still be the station of the present species. It is only when the genera *Chelone* and *Pentstemon* are merged into one, in which case the former name supersedes the latter, that *Chelone* can be the proper appellation of our plant ; and this combination is, it is needless to say, anything rather than a judicious one. I therefore agree with Mr. Benthams, in striking out of the genus *Chelone* all the plants hitherto referred to it, with the exception of *Lyonii*, *glabra*, *obliqua*, and *nemorosa*, and in placing all the others in *Pentstemon*".

Under No. 81, (*Chelone barbata*) we published the original and much-admired variety of *Pentstemon barbatum* ; that of which we now treat is an exceedingly handsome and newly-introduced variety from Mexico, taller than the former plant—attaining six feet in height, of more slender growth, and with larger flowers. Other varieties also have appeared in our gardens. One we have heard of with white flowers, which, if unstained with its usual tint, must prove a delightful accession to the genus.

Our drawing was made from a plant in the Birmingham Horticultural Society's garden, where it has proved perfectly hardy in a light dry soil. It may be increased with facility from cuttings, at any time during summer ; and the young plants may be placed out at once in a dry situation ; or, when rooted, kept in pots, with occasional shelter, till April, and then turned into the borders.

SCUTELLARIA JAPONICA.

JAPAN SCULLCAP.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of Japan.	Height. 6 inches.	Flowers in October.	Duration. Perennial.	Introduced in 1828.
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No. 778.

The convex appendage attached to the calyx of this plant has been compared to a little dish or shield,—hence the name, from the Latin *scutella* or *scutellum*. Tournefort called the genus *Cassida* (a helmet)—a name equally applicable to its calyx.

Very few plants exhibit to human eyes a more serviceable application of the calyx than is seen in *Scutellaria*. It closes over the seeds so efficiently that separate seed vessels may be thought to be superfluous. Of the utility of this infinite variety of design, how little is unveiled to human knowledge! we can but say with the poet—

“ Let no presuming impious railer tax
CREATIVE WISDOM, as if aught was formed
In vain, or not for admirable ends.
Sball little haughty ignorance pronounce
His works unwise, of which the smallest part
Exceeds the narrow vision of her mind ?”

This pretty newly-introduced plant was obliging contributed from the admirable collection of the Messrs. Pope and Sons, Nurserymen, Haudsworth. It is, probably, quite hardy, and well suited for planting on rock-work.

ISMELIA MADERENSIS.

MADEIRA ISMELIA.

Class.
SYNGENESIA.

Order.
POLYGAMIA SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of Madeira.	Height. 2 feet.	Flowers in April.	Duration. Perennial.	Introduced in 1834.
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No. 779.

Ismelia is a generic name first used by Cassini, but the meaning of it has not been recorded; we cannot, however, suppose but that its author founded it, as is usual, on some known word or words.

England owes the introduction of this elegant shrubby plant to Philip Barker Webb, Esq., whose exertions in the collection of novelties in the Madeira Islands, Teneriffe, the Canaries, &c., are well known to the botanical world; besides which, Mr. Webb's connection with celebrated botanists of the continent, has familiarized his name all over Europe, notwithstanding the treasures of his travels have been sent to this country, to his house at Milford, near Godalming.

Grown in a pot this plant is meagre, but with frame protection, and bedded out in May, it produces beautifully compact corymbs of flowers, which continue blooming till winter's icy hand nips both bud and blossom. Cuttings of the young shoots should be struck in August; when rooted, several might be placed round one pot, placed in the cold frame till March, and then potted singly, preparatory to planting out.

ERICA MACKAYA'NA.

MACKAY'S HEATH.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of Ireland.	Height. 1 foot.	Flowers in June, Aug	Duration. Perennial.	Discovered in 1834.
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No. 780.

Erica, see No. 217. *Mackayana* is given as a specific name after its discoverer, J. T. Mackay, Curator of the College garden, Dublin, a zealous and talented cultivator and botanist.

This is a dwarf and very pretty Heath, lately discovered in Ireland, and deserving cultivation, as well for its beauty as for a memento of the opposing opinions of botanists. Our acquaintance with it commenced in the botanical section of the British Association, at Liverpool, where its claim to be distinguished as a species was warmly argued. Hooker, Bentham, and Babington, now support its specific distinction; whilst Dr. Graham as strongly denies its legitimate claim to such honour.

He considers it but one of the many forms of *tetralix*, and informs us that he has traced it, on its native heath, in many grades, from one extreme form to the other, and that he has also here, and in other places, gathered an umbellate form, far less like the ordinary shape of *tetralix* than that which the most extreme shape of *Mackayana* assumes.

It has long been observed that the geological strata of a country influence its vegetable produc-

tions—a fact which has not hitherto met with the attention it deserves. Seeds of *Ænothera fruticosa* have lately been brought from India, which have produced a variety very distinct from any hitherto seen in this country, notwithstanding it is next to certain that the parent plants originated from British seeds. The same circumstance has occurred with other plants; hence the conclusion arises that a change of character has been effected by the change of climate, or the presence of some mineral, new to the plant. Mr. Cameron suggests that the same cause might have operated on this new Heath, and observes “I may mention having, some years ago, found a white variety of *Lychnis flos-cuculi*, growing in a pasture field in Surrey, in a small excavated bason, more wet than the rest of the field. The flowers in the centre of the bason were pure white, but those on its sides gradually passed into red as they approached nearer the level of the surrounding field, where none but red flowers were to be seen. My impression was that the earth had been removed down to a subsoil containing some mineral not found on the surface; or, that this bason had been the receptacle of some mineral water.” It is worthy of observation that the *Erica Mackayana* is confined to a district of hornblende rock, and also, that some of the identified specimens of *Erica tetralix* of this district assume a form different from their original type. Mr. Cameron mentions a seedling Heath having been found on Moseley Common, Warwickshire, which was not distinguishable from *Mackayana*, but it unfortunately died from some accident.





Hedysarum Sibericum.

79



Neotia cernua

82



Aconitum Japonicum.

83



Primula longiflora.

HEDYSARUM SIBERICUM.

SIBERIAN HEDYSARUM.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Siberia.	Height. 3 feet.	Flowers in July to Aug.	Duration. Perennial.	Discovered in 1838.
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No. 781.

Hedysarum, signifying a sweet perfume, has been explained, at length, under No. 441.

The Hedysarum Sibericum of Poiret, has been quoted by Don and others as the alpinum of Linneus. The present plant appears to be distinct from alpinum, and is still farther removed from obscurum. Being of handsome growth—3 feet high, and its showy racemose spikes of flowers continuing to be produced through July and August, it is a desirable plant for the back of the flower border or centre of the mound. It was raised in the Birmingham Horticultural Society's garden, from Russian seeds, imported in 1838, and the young plants flowered in 1840.

A near ally of this plant, the Hedysarum onobrychis, or Saintfoin, also a showy flowerer, is well known in some parts of England, particularly where calcareous soils are cultivated.

In cultivation, the Hedysarum Sibericum requires no peculiar treatment, but grows freely in any common garden soil, and probably will ripen seeds. It increases but slowly at the root, consequently cannot, by that means, be rapidly propagated.

NEOT'TIA CER'NUA.

DROOPING-FLOWERED NEOTTIA.

Class.
GYNANDRIA.

Order.
MONANDRIA.

Natural Order.
ONCHIDACEÆ.

Native of N. America	Height. 1 foot.	Flowers in July.	Duration. Perennial.	Introduced in 1796.
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No. 782.

The name, *Neottia*, originated with the Flemish botanist Dodonæus. It was first applied to the *Neottia nidus avis*, a plant which is common to England and the European continent; and which has been bandied from genus to genus, but generally reserving in its name some reference to the idea conveyed by the Greek word *NEOTTIA*, a bird's nest. The term was adopted in reference to the matted appearance of its fibrous roots.

So much attention has of late been paid to orchidaceous plants, that every species carries in itself a fountain of interest. The *Neottia cernua* has no great beauty to recommend it to notice, but it presents one of the peculiar forms of the natural family to which it belongs. A large portion of its allies are tropical plants, which demand a hot-house, expressly adapted to their requirements; therefore, to the cultivator of hardy plants, such representatives of the order as can be preserved without artificially heated erections become desirable.

The *Neottia cernua* should be potted in very light sandy peat, and have frame protection. It may be increased slowly by division of its roots.

Hort. Kew. 2, 5, 139.

ACONITUM JAPONICUM.

JAPAN ACONITUM.

Class.

POLYANDRIA.

Order.

TRIGYNIA.

Natural Order.

RANUNCULACEÆ.

Native of Japan.	Height. 6 feet.	Flowers in July to Sep.	Duration. Perennial.	Introduced in 1790.
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No. 783.

The origin of the word Aconitum as far as known, is given under the species previously published.

This is a bold-flowering handsome plant, requiring but the simplest management. It has brighter coloured flowers than most others; but, doubtless, like its allies, carries with it one of the most active of poisons. One species, the Aconitum lycoctonum, has been called Wolf's-bane, from its having been used for the destruction of wolves. Again, the Aconitum ferox was employed in the late war, by the natives of Nepal, to poison their wells, on the approach of the British army. This, however, can afford no reasonable preventative to their cultivation, or we must discard many of our most beautiful plants. First of all, our common favourite laurel must be banished, for it contains a deadly poison. That almond-like odour emitted by its leaves, and sometimes transferred by the cook to her nicest preparations for the table, evinces the presence of a powerful poison—Prussic Acid, the smallest quantity of which, applied to the tongue of an animal, has destroyed life. The vapour of it arising out of a vial, was quickly fatal to a bird;

and Orfila says that a professor of Vienna applied a little on his naked arm, and died soon afterwards. Notwithstanding these effects, it has proved a valuable medicine. Magendie diluted it for medicinal purposes with about two thousand times its weight of sugar and water.

The Aconite is amongst those plants from which have been obtained the potent substances called by the general name of vegetable alkaloids, from their manifesting an alkaline principle ; many of which, and especially that from the Aconite, called Aconita, or, according to the French, Aconitine, are equally as active as the Prussic Acid, both as poisons and medicinal remedies.

This class of alkalies was discovered by a German apothecary, who published some account of one of them in 1803, and again in 1816, after which the attention of the continental chemists became directed to the subject. The process by which they are obtained is not a difficult one. The plant is macerated in a large quantity of water. An alkali, as ammonia, being added, the vegetable alkali will be separated, and this being insoluble in water, may be collected on a filter and washed. To clear it of resin or other impurities, it should be mixed with animal charcoal, and dissolved in boiling alcohol. This alcoholic solution being filtered whilst hot, yields the pure vegetable alkali, either by being suffered to cool, or by evaporation. Thus we see, that although these astonishing properties are disguised in their natural state, man is endowed by his Maker with faculties to search them out, and obtain for his use whatever his nature requires.

PRIM'ULA LONGIFLO'RA.

LONG-FLOWERED PRIMROSE.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of Europe.	Height. 3 inches.	Flowers in May to July	Duration. Perennial.	Introduced in 1825.
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No. 784.

The origin of the word *Primula* is, it may be presumed, known to every reader of the Botanic Garden; it reminds us of the first offerings of spring, which are welcomed by all classes of society, even by the humble artisan, whose chief enjoyment of them is dependent on their transitory existence when gathered from their native banks and placed to die on the window ledge of his back-street dwelling.

The species of *Primula* which we now figure, is not only remarkably pretty, but is also very rarely met with, and as far as we know, not depicted in any English work. It resembles *Primula farinosa* in several particulars, but is a handsomer plant. Allioni, in comparing it with *farinosa*, says its leaves are less mealy, and less deeply toothed, the scape higher, and fewer flowers in the umbel, with the leaves of the involucre longer, and the tube of the corolla three times as long. We mention this, because *farinosa* is well known.

Primula longiflora should be kept in a pot of sandy peat, well drained, and have the protection of a frame in winter. When fully exposed in the summer it should have a shady situation.



Verbena teucrioides

3/4



Blitum virgatum.



Malva lateritia

3/4



Orchus foliosa.

3/4

VERBENA TEUCRIOIDES.

GERMANDER-LIKE VERBENA.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
VERBENACEÆ.

Native of S. America	Height. 3 feet.	Flowers in July to Nov.	Duration. Perennial.	Introduced in 1837.
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No. 785.

The meaning of the word Verbena, will be found under No. 205 and 277, as far as it is understood.

This genus has excited much interest within the last seven years, on account of the numerous varieties which have been raised from foreign seeds. The melindres group of the genus sport into varieties freely, and the limits of the several species are consequently, at present, but imperfectly defined. We have found the teucrioides to be of more robust growth than any similar species; but a fine variety of Tweediana, trained by the side of it, exceeded it in height. This latter plant, we had raised from Mexican seeds, which were sent home by the late Mr. Edward J. Lay, of H.M.S. Calliope, and obligingly presented to us by his sister.

Verbena teucrioides grows very freely in loam and leaf mould, and, like several other species, is shown to great advantage when trained against an open wall. Cuttings should be struck in July, and they will make strong plants to receive protection in a well-secured dry frame, the dwellinghouse, or the greenhouse.

BLITUM VIRGATUM.

STRAWBERRY BLITE.

Class.
MONANDRIA.

Order.
DIGYNIA.

Natural Order.
CHENOPODIACEÆ.

Native of S. Europe.	Height. 2½ feet.	Flowers in May to Sep.	Duration. Annual.	Introduced in 1680.
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No. 786.

Blitum is derived from the Greek BLITON, insipid, in allusion to the insipidity of its berries. From these, and the appearance of its leaves, it is usually called Strawberry Spinach.

The plant under consideration will not, we conceive, be grown on account of its flowers, for they rarely meet the notice of the common observer; their parts of fructification, consisting of one stamen and two styles, are, however, as perfect as in those of more specious character; but they are devoid of corolla, that appendage which usually gives beauty and pleasure. Here the deficiency is supplied by an ornamental berried calyx, placed at the foot of the leaf-stalk, which produces a pleasing and rather gay effect in the borders. They are very succulent, insipid, and harmless; and are said to have been used, formerly, in puddings, to give them colour. Parkinson says they are full of an excellent juice, but for what purpose he has not mentioned.

It requires no care in culture, for if once sown, and permitted to shed its seeds, young plants will not fail to appear every subsequent spring. A shady situation prolongs its beauty.

MALVA LATERTIA.

PALE RED-FLOWERED MALLOW.

Class.
MONADELPHIA.

Order.
POLYANDRIA.

Natural Order.
MALVACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Buenos Ayres	9 inches.	September.	Perennial.	in 1839.

No. 787.

The softening and emollient qualities of the Mallow, obtained for it, amongst the Greeks, a name indicative of such properties. Malva of the Latins was founded on MALACHE of the Greeks, signifying soft. Lateritia, from the Latin later, a brick, is a name adopted in allusion to its brick-like colour.

This species of Malva is a late addition to British gardens, and promises to be a desirable one, being very distinct both in appearance and habit from any previously in cultivation. Dried specimens, and seeds also, were first sent to this country by Mr. Tweedie, from Buenos Ayres, and Entre Rios, botanical stations which have proved to English collectors, exceedingly productive of valuable plants.

The Mallow now under consideration, displays a peculiarity of habit, for an explanation of which we are indebted to Mr. Cameron, the Curator of the Birmingham Botanic Garden, whose long experience, coupled with acuteness of observation of the habits and culture of exotics, has furnished much valuable information to the English cultivator.

Our drawing was made from a specimen produced in the garden of the Birmingham Horticultural Society, under the care of Mr. Cameron; and in allusion to its prostrate stems, he says, "Upon taking up some runners of the *Malva lateritia*, I found its creeping stems rooted at every joint. The roots when first emitted, are fibrous, and several in number; one, however, soon takes the lead downwards, and becomes long and fusiform—in some instances more than a foot in length, and half an inch in diameter in the middle, for it tapers from the centre up to the joint, as well as downward to the point. I do not recollect having seen any other plant root in this manner. If hardy enough, it would soon bind down any moving sand, as its tough stems would form a complete mat over it, and they would be firmly fastened, at every joint, by the united power of the fusiform and the fibrous roots."

This plant was, doubtless, designed for the very purpose here suggested. Its roots and stems spreading on and near the surface, collect and hold together, a light and sandy soil, and as an artificer would apply at intervals, a bond to render his work secure, a strong descending root is provided to hold down the whole with firmness. Surely the most determined sceptic cannot here doubt either the existence of design or the efficiency of purpose.

We cannot state, with confidence, that the *Malva lateritia* will bear severe frost, therefore recommend that some of the runners be potted in autumn; and kept in a cold frame, with due winter protection, till the following April.

OR'CHIS FOLIO'SA.

LEAFY-SPIKED ORCHIS.

Class.
GYNANDRIA.

Order.
MONANDRIA.

Natural Order.
ORCHIDACEÆ.

Native of Canary Isles	Height. 1 foot.	Flowers in June.	Duration. Perennial.	Introduced in 1829.
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No. 788.

Orchis is a name which has been adopted from the Greek language, in allusion to the roots.

For the opportunity of figuring this fine species of Orchis, we are indebted to the Messrs. Pope, Nurserymen, of Handsworth. In its general character it resembles our British plant, the *Orchis latifolia*, but is much larger; its three-lobed lip also produces a marked difference of appearance in their flowers when compared together. It is by far a more handsome plant than very many of the highly-prized tropical species, on which so great an expenditure is necessarily made to meet their natural requirements.

The culture of hardy and half-hardy Orchidaceous plants has not hitherto met that attention which it deserves. A distinction should first be drawn between those which are natives of chalk hills, and such as are indigenous to moist or peaty plains; with this difference held in mind, no great difficulty would present itself. The species before us should be potted in turfy peat, be well drained, and have frame protection in winter, and shade in summer.



Iris brachycuspis

72



Digitalis ambigua.

73



Clematis montana.

74



Echinacea dubia

75

IRIS BRACHYCUSPIS.

SHORT-POINTED IRIS.

Class.
TRIANDRIA.

Order.
MONOONYIA.

Natural Order.
IRIDACEÆ.

Native of Siberia.	Height. 18 inches.	Flowers in May to July	Duration. Perennial.	Introduced in 1819.
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No. 789.

Iris, the rainbow. *Brachycuspis*, from the Latin, is translated literally, short-pointed.

A portion of the specific character of this plant is made dependent on the remarkably short interior laciniaë of the corolla, which leave the flower with three prominent parts instead of six, as is usual. Their rudiments may, however, be seen, between the outer segments, as will be evident on close examination of our plate.

Seeds of this pretty Iris were brought from the northern part of Siberia, by Professor Adams, to the Gorenki gardens, and distributed thence by Dr. Fischer, to various parts of Europe. We are not aware on what grounds the bulbs are considered poisonous, a property that does not seem to belong to the order. Orris root of commerce, which is the rhizoma of *Iris Florentina*, is well known for its violet-like scent, and is used in hair-powder and tooth-powder, simply to communicate its agreeable fragrance. One or two species are esteemed as possessing aperient qualities, but none are generally known as being deleterious.

Iris brachycuspis requires no peculiar care.

DIGITALIS AMBIGUA.

AMBIGUOUS FOXGLOVE.

Class.
DIDYNAMIA.

Order
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Native of Switzerland.	Height. 2 feet.	Flowers in August.	Duration. Perennial.	Introduced in 1596.
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No. 790.

Digitalis, from the Latin, in allusion to the finger-shape of the flowers. (See No. 94.) Parkinson, in his 'Paradisus Terrestris,' or, as he calls it, a 'Garden of all sorts of pleasant flowers, which our English air will permit to be nursed up,' published in 1629, says of the Digitalis, "We call them, generally, in English, Foxglovè; but some, as thinking it too foolish a name, do call them Finger-flowers, because they are like unto the fingers of a glove, the ends cut off."

A plant, called intermedia, and represented as being of character between this and lutea (No. 94,) bears much resemblance to the one before us, indeed we doubt whether they are not identical, differing only in pubescence and such circumstances as may arise from cultivation. Neither the one or the other is frequently met with, although very ornamental plants, and of easy cultivation.

Digitalisambigua is a handsome border plant; and in Germany, is said to inhabit mountainous situations, just as the species pupurea does in England.

It may be propagated by division of the roots, or by seeds, which it freely produces.

Don's Syst. Bot. 4, 505.

CLEMATIS MONTANA.

MOUNTAIN CLEMATIS.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of Nepal.	Height. 20 feet.	Flowers in May.	Duration. Perennial.	Introduced in 1831?
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No. 791.

The usual habit of growth of this genus is alluded to in its name, Clematis, the word being derived from the Greek KLEMA, signifying a twig or vine branch.

Of all the species of Clematis with which our gardens have hitherto been furnished, this, we believe to be the most desirable. It produces a brilliant mass of fragrant and exceedingly delicate white flowers, having a very slight tinge of pink. Festoons of these, dropt from beneath arches of trellis-work, with neighbouring shrubs to form a background, may produce a picture, worthy of the pencil of a Reubens, without the aid of architecture.

Great Britain is indebted for this, as well as for several other valuable plants, to the late Lady Amherst, who brought it from India. It was first called Clematis odorata, and is a native of the Himalayan mountains, flourishing there at an elevation of from five to seven thousand feet above the level of the sea.

It may most readily be propagated by layers; or cuttings of the half ripe wood, planted under a hand glass, will make root very readily.

Don's Syst. Bot. 1, 9.

ECHINA'CEA DU'BIA.

ECHINACEÆ.

Class.
SYNGENESIA.

Order.
FRUSTRANEA.

Natural Order.
COMPOSITÆ.

Native of Mexico.	Height. 4 feet.	Flowers in October.	Duration. Perennial.	Introduced in 1837.
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No. 792.

The name is explained under No. 679.

This handsome flower appears late in the season, indeed, the autumnal months possess the privilege of being embellished by nearly all the showy flowers of the order Compositæ; just as if it were a greater effort of nature to perfect a compound flower, than to produce those beautifully simple children of the spring—the Snowdrop, the Primrose, and Violet. There is, however, one prominent exception—one “wee tipped flower” which is compound, and is every where, and at all times. It is the Daisy—often called beautifully simple, but is, in reality, beautifully compound and elaborate, and offers an example of the order. Let that pleasing botanist, Rousseau, describe it. He says, “Look at it well, for I am sure you would have never guessed from its appearance, that this flower, which is so small and delicate, is really composed of between two and three hundred other flowers, all of them perfect, that is, each of them having its corolla, stamens, pistil, and fruit. Every one of those leaves, which are white above and red underneath, and form a kind of crown round the flower, appearing to be

Flor. Cab. 131.

nothing more than little petals, are in reality so many true flowers; and every one of those tiny yellow things also, which you see in the centre, and which at first you have perhaps taken for nothing but stamens, are real flowers. Pull out one of the white leaves from the flower, you will think at first that it is flat from one end to the other, but look carefully at the end by which it was fastened to the flower, and you will see that this end is not flat, but round and hollow, in form of a tube, and that a little thread ending in two horns, issues from the tube; this thread is the forked style of the flower, which, as you now see, is flat only at top. Next, look at those little yellow things in the middle of the flower, and which, as I have told you, are all so many flowers; if the flower is sufficiently advanced, you will see some of them open in the middle, and even cut into several parts. These are monopetalous corollas, which expand, and a glass will easily discover in them the pistil, and even the anthers with which it is surrounded. This is enough to shew you by the eye, the possibility that all these small affairs, both white and yellow, may be so many distinct flowers; and this is a constant fact." Our young readers have here a key to the knowledge of Compound Flowers.

Echinacea dubia is tuberous rooted, like the *Dahlia*; and, doubtless, may be preserved in the same manner; it has, however, been the practice, hitherto, to take the roots up from the borders, in autumn, and pot them, preparatory to keeping them under some sort of protection, till spring, to be then turned out again.





Tigridia conchiflora.



Monarda Russelliana.



Anemone montana.



Scabiosa Webbiana

TIGRID'IA CONCHIIFLO'RA.

SHELL-FLOWERED TIGER-FLOWER.

Class.
MONADELPHIA.

Order.
TRIANDRIA.

Natural Order.
IRIDACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Mexico.	1 foot.	May to Sept.	Perennial.	in 1823.

No. 793.

Tigridia, from TIGRIS a tiger; and EIDOS likeness; the allusion will be evident.

Under a very early number we gave an account of the *Tigridia pavonia*—one of those splendid children of nature which never fails, at first sight, to surprize even the most apathetic; but we soon forget these impressions; it is difficult to look back with, perfect recollection, on the feelings of wonder and pleasure which have, time ago, passed over the mind—they are gone as a shadow. This, the only other known species of *Tigridia*, is scarcely less beautiful, but still is wanting in the variety and depth of colour and brilliancy so prominent in its sister species.

As may be expected, their beauty is transient—the splendour of a day only, for as Addison says,

“Beauty soon grows familiar to the lover,
Fades in the eye and palls upon the sense.”

The bulbs may be planted in the borders at the end of April, and should be taken up again after flowering. Or, they may be forwarded in a pot, in the hotbed, and be turned out into the open ground in May.

MONAR'DA RUSSELLIA'NA.

RUSSELL'S MONARDA.

Class.
DIANDRIA.

Order.
MONOONYIA.

Natural Order.
LABIATÆ.

Native of N. America.	Height. 2½ feet.	Flowers in September.	Duration. Perennial.	Introduced in 1823.
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No. 794.

Monarda, after Monardes, a Spaniard. Russelliana, the specific name, was adopted by Nuttall, in honour of his friend, Dr. Russell.

Nuttall, the American Botanist, discovered this plant in the Valley of the Arkansa, in North America, and seeds of it were subsequently sent by him to England. It is a plant which was much sought for on its introduction and is exceedingly pretty; but like almost every other that is worth possessing, it will not smile on in healthful verdure under the endurance of perpetual neglect.

Our drawing of this interesting species was made four or five years ago, from a specimen then growing in a London nursery, since which time we have not seen the plant. It is rarely met with, and may, possibly, be lost to the country.

Although this Monarda will bear the frosts of mild winters, in a favourable situation, it would be but common prudence to protect a plant in a cold frame: during summer, however, it succeeds best in the borders. It should have a dry light soil, and may be increased by division of its roots, or by cuttings.

ANEMONE MONTANA.

MOUNTAIN WIND-FLOWER.

Class.
POLYANDRIA.

Order
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of Switzerland	Height. 1 foot.	Flowers in June.	Duration. Perennial.	Introduced in 1830 ?.
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No. 795.

For the derivation of *Anemone*, see No. 145, &c.

If, under the management of the florist, the *Anemone* has greatly increased its beautiful varieties, it is not less observable that the zeal of the botanist has, year after year, brought together numerous distinct species. They are, in general, hardy plants, but, excepting a species or two, impatient of moisture. Its habit, in this particular, may be considered as indicated by its tuberous roots, for nature provides a reservoir for moisture, only to meet contingencies, and if a plant be the inhabitant of moist places, it needs no reservoir to collect and retain its nutriment. In the *Anemone nemorosa*, which inhabits groves and the sides of brooks, we find its roots changing from the irregularly-shaped thick knob of numerous species, to a cylindrical creeper, of the size of a straw—an evident approach towards the fibrous state.

We are indebted to the favour of the Messrs. Pope, of Handsworth, for this handsome *Anemone*. It was obtained by them from the Messrs. Loddiges, who received it from Switzerland. It is a handsome plant and flourishes in a light soil.

SCABIOSA WEBBIA'NA.

WEBB'S SCABIOUS.

Class.
TETRANDRIA.

Order.
MONOGYNIA.

Natural Order.
DIPSACEÆ.

Native of Phrygia.	Height. 6 inches.	Flowers in July.	Duration. Perennial.	Introduced in 1818.
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No. 796.

It is generally admitted, amongst botanists, that the word Scabiosa arose out of scabies, on account of some one or more of this species having been used in the cure of cutaneous disorders.

Whether our present subject, which was collected on Mount Ida, by, we believe, Mr. Philip Barker Webb, ever came under the cognizance of the Greek physicians is doubtful; it is probable that it never did, for the knowledge of the virtues of Scabious is not obtained from those Grecian store-houses of herbal wisdom—Theophrastus and Dioscorides, but, from comparatively modern writers. Doctor William Turner, who was, as Poulteney says, the earliest writer among us, that discovered learning and critical judgment in the knowledge of plants, classes the Scabious in the third part of his Herbal “Wherein are contained the herbes, trees, rootes, and fruytes, whereof is no mention made of Dioscorides, Galene, Plinye, and other olde Authores.” He says of it, alluding to the British species, “It hath the name of Scabbes, is good against scabbes and breking out of y^e skin, whether it be take in w^t y^e broth wherein it is soddē

in, or if the sore places be anointed with the iuyce of it, or with an oyntment made of it. It is good for al the diseses of y^e brest and lunges, for it purgeth y^e lunges and brest of all filthy matter. It is very good to be layd vpon pestilent sores to ripe them, and to breke them, in so much y^t dedly sores be anointed and plastered therewith al, in iii houres as y^e later writers hold, the same wil vanishe and go away, or ellis at the lest be resolved or made ripe."

Seeing that with Turner dawned the light of botanical knowledge, it may not be uninteresting to trace, hastily, the chequered steps of the life of this eminent, although nearly forgotten scholar.

Pulteney, from whom we shall here select, says, the history of English Botany in the time of Turner, from its imperfect, and even barbarous state, may, perhaps not unaptly, be considered as the fabulous age of the science among us. With Turner, however, arrived the true era of its birth in England. He was born at Morpeth, about the year 1515, and educated at Cambridge, where he acquired great reputation for his learning; but, whilst a student of Pembroke Hall, he complains that "Whereas I could learn never one Greke, neither Latin, nor English, name, even among the physicians, of any herbe or tree; such was the ignorance at that time, and as yet there was no English Herbal, but one all full of unlearned cacographies and falsely named herbes." Turner, as was then not uncommon, became a divine as well as physician; was zealous in support of the reformation; was imprisoned, and then became a voluntary

Don's Syst. Bot. 3, 694.



Rubra fragrans.

72



Rhododendron Dauricum.



Cistus Lusitanicus.

73



Trollius Americus.

74

RIBES FRA'GRANS.

FRAGRANT CURRANT.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
GROSSULACEÆ.

Native of N.America	Height. 4 feet.	Flowers in May.	Habit Shrub.	Cultivated in 1826.
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No. 797. .

Ribes, an Arabian name, was originally used for an acid plant, which it is now supposed was the *Rheum ribes*. It should not be forgotten that botanists have always considered it better to employ established terms, if unobjectionable in form, than invent new ones; but as the imperfect descriptions of the ancients render it impossible, at the present day, to discover which of their plants were intended by their names, it will excite no surprise if, as in the present instance, they are given to subjects very different from those for which they were originally designed.

The *Ribes fragrans* was obtained from the rich collection of the Messrs. Loddiges, and is published in their Botanical Cabinet, under this name; it is not, however, the *fragrans* of Don, and we question its being more than a variety of *Aureum*, although its berry may be somewhat different in shape. It is a very showy flowerer, and fragrant; and its fruit, which it bears rather freely, is larger than the black currant, but not very agreeable in flavour. Quite hardy, and may be increased by layers or cuttings.

exile during the reign of Henry VIII. At the accession of Edward VI, he returned to England, became a prebend of York, canon of Windsor, and dean of Wells. During the reign of Mary he again retired to the continent, but at her decease, returned, and Elizabeth reinstated him in all his church preferments. To her he dedicated his Herbal, and after complimenting her Majesty, on account of her skill in the Latin language, he acknowledges with gratitude her many favours.

Turner's banishment appears to have been of great advantage to him in his botanical pursuits; for he resided at Basil, Strasburgh, Bonn, and Bologna. In the latter of these places he attended the lectures of Ghinns, who was the first that erected a separate professorial chair for botanical science, which he filled, with great applause, for twenty-eight years; having also founded a physic garden there, to demonstrate the plants of which he spoke. As well as a good botanist, for the period in which he lived, Turner was eminent for his knowledge of other departments of natural history. He wrote on birds, fishes, and mineral waters; and extensively on divinity.

Scabiosa Webbiana forms a pretty tuft of greyish foliage, and its flowers, although individually not possessing gaiety, have a neat effect. It should be planted in a light soil; and it is particularly requisite with this, as with many other plants, that it be taken up, divided, and transplanted, once in every two years at the least. By neglect of this precaution many plants are lost, even by cultivators who know the consequence of its omission.

RHODODEN'DRON DAU'RICUM.

DAURIAN RHODODENDRON.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Native of Siberia.	Height. 3 feet.	Flowers in March.	Duration. Perennial.	Introduced in 1780.
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No. 798.

The meaning of *Rhododendron* is explained under No. 63. The word *Dauricum* is sometimes written *Dahuricum*, but would, with propriety be written with the diæresis, thus, *Daüricum*, and, of course, pronounced as four syllables.

Of the *Daurian Rhododendron* there are two varieties, both natives of *Siberia*, but of very different appearance. That which was first introduced to our gardens has flowers of a pale rose colour, and its foliage of pale green, ultimately assuming a brown tint, whilst that of the variety here figured, is of a deep green, and its flowers purple. We esteem it as a much more valuable plant than its ally, forming a more compact and handsome shrub, and being, from its hardy nature, much less liable to be injured by frosts. They agree in their habit of flowering in the early part of spring; oftentimes whilst snow attaches to their branches, which heightens, in a great degree, the effect of the deep tints of our present plant.

‘The species’ says the *Rev. J. Bellenden Ker*, on the authority of *Pallas*, ‘is distributed over a great part of *Siberia*, and has been observed to ex-
Don’s Syst. Bot. 3, 845.

tend itself through the deserts of Mogul Tartary to China and Tibet. It grows very commonly in the pine forests ; and in some parts in such profusion, and so densely, as to make whole tracts appear a sheet of purple in April and May, the period when it is in blossom.' It may be further stated on the same authority that it is almost peculiar to the subalpine tracts of eastern Asia ; and is most abundant about Baikal, assuming, as it is found more northerly, slender flowers and narrow leaves. The leaves are sometimes used as a substitute for those of the Tea-tree. The new foliage is put on after the departure of the bloom.

Rhododendron Daüricum is not unfrequently kept in the greenhouse, where it forms a handsome plant, and its flowers are seen to advantage. This is not always the case under full exposure, from their being met by severe frosts in the early part of spring. The plant will, however, be looked upon with most interest as a hardy shrub, and although it may be unnecessary, in respect to its safety, to afford it any protection, still the trouble of giving it an occasional covering to preserve the flowers, will be amply repaid by their additional beauty. Hoops tied to stakes, and covered with a mat would be portable and efficient.

Good peat soil is a requisite that cannot, we believe, be dispensed with in the culture of this plant, although it is not indispensable with all species of *Rhododendron*. May be increased by cuttings of the young wood, which should be struck in sand, under a bell-glass, submitted to a moderate heat.

CISTUS LUSITANICUS.

Var. decumbens.

DECUMBENT LUSITANIAN CISTUS.

Class.

POLYANDRIA.

Order.

MONOXYNIA.

Natural Order.

CISTINACEÆ.

Native of	Height.	Flowers in	Habit	Introduced
S. Europe.	18 Inches.	September.	Shrub.	before 1835.

No. 799.

For the origin of the name *Cistus* see No. 449.

We have previously published one variety of *Cistus Lusitanicus*—a shrub of rather upright growth, whilst the present plant is decumbent, producing a different feature in the shrubbery, yet not so humble as its near allies, the little *Helianthemums*, which were formerly united with the *Cistus*, and formed a genus, not alone incongruous, but inconveniently extensive, containing about two hundred species. At every turn we see the exuberance of nature to be incomprehensible—the bounty of the Creator demanding unlimited and unceasing gratitude. In the expressive words of our inimitable poet, may we continually exclaim

“I can no other answer make, but thanks,
And thanks, and ever thanks.”

This is a very ornamental low shrub, but it will sometimes be destroyed by severe frosts, therefore a few cuttings should be struck in the summer, for protection in a frame or dwelling-house. An experienced cultivator suggests that by hybridization the *Cistus* would be likely to produce valuable varieties, since those of *Helianthemum* are so numerous.

TROLLIUS AMERICANUS.

AMERICAN GLOBE-FLOWER.

Class.
POLYANDRIA.

Order
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of N. America.	Height. 6 inches.	Flowers in April, May.	Duration. Perennial.	Introduced in 1805.
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No. 800.

The derivation and signification of the word Trollius is given under No. 209. It will be at once seen that the name is in no degree applicable to the present plant, which happens from its having been adopted for the European species, when that was the only one known to botanists.

The two species of Trollius which we have figured—the European as No. 209, and the Asiatic No. 763, are of far more robust growth, and of bolder character than the American plant now under consideration: those are well suited to the shrubbery, or back-ground of the border, whilst this, from its low stature and early flowers, should occupy a place in its foreground.

We find this plant to be remarkably hardy; indeed this would be indicated by its habitat, which is in shady moist places on mountains, in the state of New York; in some parts of which, the extremes of heat and cold are much greater than in any part of this country.

The Trollius asks not for the slightest care of the florist, other than being planted in the soil, in a situation either shaded or exposed.

Don's Syst. Pot. 1, 45.





Coronilla emerus.

7/3



Raphiolepis Indica

7/3



Polygala paucifolia



Dirca palustris.

7/3

CORONILLA EMERUS.

SCORPION SENNA.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of France.	Height. 6 feet.	Flowers in April, June.	Habit. Shrub.	Introduced in 1596.
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No. 801.

Coronilla signifies a little crown, which is prettily represented by the inflorescence of some species of the genus. See No. 226.

Emerus, a name which was originally applied to this shrub, as a generic appellation, is from the Greek, and signifies agreeable. It has been called Scorpion Senna from the old name, Colutæa Scorpioides of Gerard, the pods having swellings, as Parkinson says, like a scorpion's tail.

Although well known, this shrub is not so frequently introduced into prominent situations as it deserves; for, as is rightly observed in that elaborate work — Loudon's Arboretum, 'The mingling of yellow flowers, with flower buds more or less red, and the elegant foliage, render this hardy shrub a very desirable one for its beauty.' The habit of the shrub, too, would indicate its utility in forming garden hedges, which could be so pruned as to be made very ornamental, and it has the advantage of being exceedingly durable.

It may be grown in any common garden soil, and increased easily by layers, or by seeds, which the plant frequently ripens.

RAPHIO'LEPIS IN'DICA.

INDIAN' HAWTHORN.

Class.
ICOSANDRIA.

Order
DI-PENTAGYNIA.

Natural Order.
ROSACEÆ.

Native of China.	Height. 4 feet.	Flowers in Feb. to Aug	Habit. Shrub.	Introduced in 1806.
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No. 802.

The generic name, *Raphiolepis*, is compounded of the Greek words *RAPHIS*, a needle, and *LEPIS*, a scale, to designate the character of the bractæas, or little awl-like scales, which will be seen on the peduncles, beneath the flowers.

In the nurseries, a shrub is always to be met with under the name *Snowy Mespilus*; and by which the *Mespilus Canadensis* of Linneus, or *Amelanchier botryapium* of modern botanists, was formerly intended. But of late, it appears, that some nurserymen have given the name *Snowy Mespilus* to the plant before us, which was long known as *Cratægus Indica*, from its having been published in the *Botanical Magazine* under this title. That these shrubs may be clearly distinguished, we will publish the *Amelanchier* in question, to guard our friends, as far as we are able, from disappointment through this confusion of names.

As a standard, this shrub forms a light and airy head, and its abundant racemes of delicately white flowers, in spring, produce a very pleasing effect in the shrubbery. It may be propagated by budding or grafting it on the hawthorn or quince.

POLYG'ALA PAUCIFO'LIA.

FEW-LEAVED MILKWORT.

Class.
DIADELPHIA.

Order.
OCTANDRIA.

Natural Order.
POLYGALACEÆ.

Native of N.America	Height. 3 inches.	Flowers in May to Aug.	Duration, Perennial.	Introduced in 1812.
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No. 803.

Here, again, the Greek language is drawn upon to supply a botanical name. The words POLUS, much, and GALA, milk, being compounded, to inform us that the plant polygala is productive of milk, in a more than ordinary degree, in cattle that eat it.

From the Greek language having continued almost immutable, and the facility with which its words admit of combination, writers in every department of science, have usually resorted to it for the supply of materials for new terms required in science or art. Offence should not be taken at the introduction of these; for as new objects or operations present themselves, so will it be seen to be requisite that terms be coined as their representatives.

The Polygala paucifolia is a pretty and very rare plant; it is the largest flowered American species, but is rather impatient of culture. It succeeds best when potted in very sandy peat, and sheltered in winter. Its roots, which are stoloniferous, often run round the sides of the pot, and may be divided for increase.

Don's Syst. Bot. 1, 361.

DIR'CA PALUS'TRIS.

MARSH LEATHER-WOOD.

Class.

OCTANDRIA.

Order.

MONOCYNYIA.

Natural Order.

THYMELACEÆ.

Native of Virginia.	Height. 4 feet.	Flowers in March, April.	Habit. Shrub.	Introduced in 1750.
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No. 804.

The name of this genus, which contains but the single plant now under notice, has an allusion to the same circumstance as the specific term. *Dirca*, from the Greek, signifying a fountain, and *palustris*, a marsh, both indicate the habitat of the plant, as belonging to watery places.

The shrub has been called Leather-wood by the natives of Canada, where it is a useful material, the twigs being remarkable for their toughness, and are employed in the manufacture of various small articles; and of the bark are made ropes, baskets, &c. it being quite as strong and pliable as that of our lime tree.

The *Dirca*, although growing but a few feet high assumes the habit of a small tree, and is scarce in our gardens and shrubberies. Its flowers are small, but they appear early in the season, and are rendered more conspicuous by the pale green scales of the buds by which they are surrounded. These, for a time, seem to act the part of leaves, which cannot be immediately available to the uses of the plant, inasmuch as the bud of the young shoot is contained in the bud of the inflorescence.

Wherever the infinity of variation produces a deficiency of one part in a plant, we always find such deficiency, or, we should rather say, diversity of arrangement, beautifully equalized or compensated by a new arrangement of action in another. 'Nothing, says, Dr. Lindley, (Botanical Register, 41, 1841) in the vegetable Kingdom is more curious than the way in which plants are enabled to alter one organ so as to perform the office of another, when that other is from any cause destroyed or undeveloped. Thus, in cactaceous and other succulent plants which have no leaves, the surface of the stem is greatly enlarged, and performs the office of breathing and digesting; in the Combretum, which has no tendrils to climb with, the stalks of the leaves hook back, and furnish the plant with claws of strength; when, in the Wattle trees of our Australian colonies, nature refuses to command the appearance of leaves, straightway the leaf-stalks flatten and expand, and take their place; and so of multitudes of others.

Dirca palustris is a native of marshy woods in various parts of North America; and it is said that the partiality of snails for the young plants prevents it from being more generally distributed over our shrubberies. It is deciduous, therefore in planting, due regard should be paid to its being suitably backed by a dark evergreen, which will assist in giving its pale tints effect in spring. It may be slowly increased by layers, which will require two years in rooting. Its soil should be peat and loam; or, if a moist situation can be allotted it, sandy peat alone.





Ranunculus Asiaticus

75



Campanula pulla

76



Iris Persica

77



Asperula Arcadiensis

W. H. & S. W. H. & S. W. H.

RANUNCULUS ASIATICUS.

Variety; Cathcart.

GARDEN RANUNCULUS.

Class.

POLYANDRIA.

Order.

POLYGYNIA.

Natural Order.

RANUNCULACEÆ.

Native of Levant.	Height. 1 foot.	Flowers in June.	Duration. Perennial.	Cultivated in 1596.
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No. 805.

Ranunculus is deduced from the Latin rana, but the connexion between the frog and the flower is by no means evident. See No. 271.

The double Ranunculus has been so long a favourite with florists, and some varieties of this beautiful plant have been fostered with such parental care, that they have really attained to old age, and are comparatively weak in habit and unproductive of flowers. To renovate this favourite flower by new varieties, has been a desideratum with both English and Dutch cultivators.

The Messrs. Tyso and Son, of Wallingford, who raised the present plant, which they call Cathcart, and to whose kindness we are indebted for it, rank amongst the first cultivators of the Ranunculus. They have raised many thousands of seedlings, from amongst which a hundred and eighty, of superior qualities, have been selected and named. These flower much more freely than the older ones; and the mode of culture which they pursue, they have liberally enabled us to lay before the public in the Auctarium, (section 194) to which we refer our readers.

CAMPAN'ULA PUL'LA.

RUSSET BELL-FLOWER.

Class.
PENTANDRIA.

Order
MONOGYNIA.

Natural Order.
CAMPANULACEÆ.

Native of Austria.	Height. 6 inches.	Flowers in June, July.	Duration Perennial.	Introduced in 1779.
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No. 806.

There are very few flowers in this extensive genus but will readily remind the reader of the origin of their name, for they are in general true representatives of little bells.

Were the numerous species of *Campanula* brought together into one parterre, and properly arranged, we believe there would scarcely be a genus, taking the entire of the summer, that would excel them in beauty. Attempts have been made to divide it into smaller genera, but so naturally connected are nearly the whole of its members, that it has been deprived of few only. It has now about one hundred and fifty species, nine-tenths of which are perfectly hardy.

It has long been the custom amongst cultivators of florists' flowers, to adopt of such plants, some two or three particular sorts; we wish that it would also become fashionable for those who delight in the perfection of their gardens, to pay primary attention to one or two genera; and as far as is possible, collect every species and remarkable variety of such genus. We suggest this to our readers, and would mention the following as suitable genera

for the purpose, viz. Campanula, Dianthus, Pentstemon, Phlox, Potentilla, Verbena, Iris, Lilium, Pœonia, Rosa, Rhododendron. And that such cultivators may be properly distinguished amongst those who do not aim at perfecting any one genus or family of plants, we shall here propose a title also, which may be conferred upon them, and by which they might bear honourable distinction amongst their contemporaries. The Latin language has already furnished us with the names Horticulturist and Floriculturist, therefore for those who collect together, and cultivate, complete genera, we propose the title Genericulturist; and we trust that many will step forward to claim the dignity here offered them.

There is not, perhaps, in the whole genus Campanula a plant of neater and more pleasing growth than the species now under notice. Sweet suggests that it may be planted as an edging to the parterre; and its neat tufted habit, and abundance of showy flowers, certainly make it suitable to such use. At present it may be called a scarce plant, but there is no evident reason why it should be so, being, as it is, quite hardy excepting, perhaps, in wet, tenacious, or stiff, soil. It may be kept in pots; and then should be potted in peat, mixed with a little loam and sand, and well drained by a deep layer of small potsberds, at the bottom of the pots. It will, however, grow finer, and increase faster, if planted out in a peat bed, where its underground stolens have room to spread without the restriction of pot imprisonment. Caution should in such case be used to prevent injury by hoeing and digging.

IRIS PERSICA.

PERSIAN IRIS.

Class.
TRIANDRIA.

Order.
MONOONYIA.

Natural Order.
IRIDACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
Persia.	4 inches.	March.	Perennial.	in 1629.

No. 807.

For the derivation of Iris see previous numbers. The name Flower-de-luce, or Fleur-de-lis, sometimes used for this genus, has been corrupted from the French Fleur de Louis, or Louis's flower, a distinction it obtained in the twelfth century, in consequence of Louis VII of France having adopted it as an heraldic symbol, when he joined the Crusaders. Subsequently it became incorporated in the French arms, and has so continued ever since, although in a somewhat corrupted shape.

The Persian Iris is a delightful plant, which flowers early in spring, and by its odour reminds us of the forthcoming season of perfumes. These early harbingers of pleasure afford enjoyment by anticipation, independently of their own display of beauty; and there are very few, it may be hoped, who are unconscious of the feelings of cheerfulness, and of the gratitude to an allwise benefactor, which they are calculated to inspire.

It may be flowered in the borders, but with more gratification in pots of rich light earth. It increases slowly, which is unimportant, as Dutch roots can be purchased at half-a-crown the dozen.

Loudon's Ency. of Pl. 46.

ASPER'ULA ARCADIEN'SIS.

ARCADIAN WOODROOF.

Class.
TETRANDRIA.

Order.
MONOGYNIA.

Natural Order.
RUBIACEÆ.

Native of	Height.	Flowers in	Duration,	Introduced
Areadia.	3 inches.	May.	Perennial.	in 1819.

No. 808.

The generic name, *Asperula*, is a diminutive of *asper*, signifying rough, which has an allusion to the leaves. The English name, *Woodroof*, as is observed by Martyn, is not derived from any foreign language, and the orthography of it is various. We may quote it as a specimen of the mutability of an English name. Turner calls it *Wood-rose* or *Woodrowell*; Gerard *Woodrooffe*, *Woodrowe*, and *Woodrowell*; Parkinson *Woodrooffe*; and some old authors *Woodderowffe*. It seems at first that these names are derived from the place of growth, and the roughness of the seeds, but Turner says, "It is a short herbe of a span long, four-square and smal, about the which growe certayne orders of leaves, certayne spaces goynge betwene, representing some kindes of rowelles of sporres, whereof it hath the name in English." The corruption from *Woodrowel* to *Woodroof* through *Woodrowe* is easy.

The observations of the old authors have reference to that species of *Woodroof* called *Asperula adorata*, and the quaint one of Gerard should not be lost. It is a fair sample of the descriptions of his age. He says "*Woodrooffe* hath many square stalkes

full of ioints, and at euery knot or ioint seuen or eight long narrow leaues, set round about like a star, or the rowell of a spurre: the floures grow at the tops of the stems, of a white colour, and of a very sweet smell, as is the rest of the herbe, which being made vp into garlands or bundles, and hang-ed vp in houses in the heat of Sommer, doth very wel attemper the aire, coole and make fresh the place, to the delight and comfort of such as are therein."

The ordour of the plant here referred to by Gerard, is well-known as resembling that of the sweet-scented vernal grass, or Tonkin Bean; this, however, must be understood as applying to it when dried, for, in a fresh state, whether bruised or otherwise, it has no such quality. Laid amongst clothes, it is as agreeable, to most persons, as Lavender flowers, and, according to Linneus, is a protection against insects.

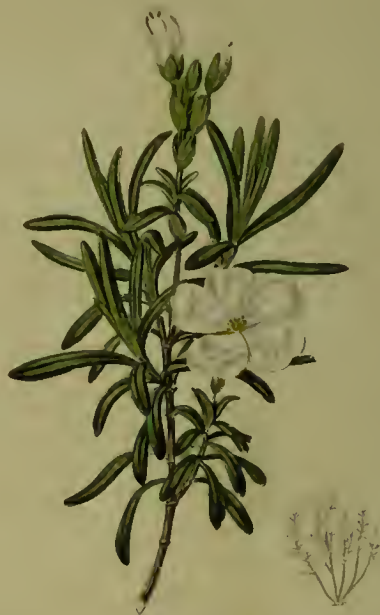
Asperula Arcadiense is nearly related to the English plant, *odorata*, but is smaller, and its flowers much prettier. It is sometimes erroneously called *Galium Græcum*, with which it has little affinity. It was first discovered on mount Tyria, in Arcadia, hence to the classic it may recal scenes of interest, although the Arcadians were rather the sons of war than literature.

It is well suited for planting amongst artificial rock-work; but after frost the soil should be pressed about its roots. If potted, it should be in sandy peat, on a good stratum of drainers, and a few of these should also be mixed with the peat, which will encourage the growth of the roots.



Stachys speciosa

73



Helianthemum libanotis



Epimedium violaceum.

74



Liriodendron tulipifera.

75

STA'CHYS SPECIO'SA.

HANDSOME HEDGE NETTLE.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of Mexico.	Height. 4 feet.	Flowers June to Sep.	Duration, Perennial.	Introduced in 1839.
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No. 809.

The Greek word, STACHUS, a spike, has given a name to this genus, from the spike-like inflorescence of some of the species. The whorled character of our present plant but ill accords with the title.

For this most desirable plant for the open parterre we are indebted to Mr. Rendle of the Union Road Nurseries, Plymouth, who obligingly forwarded it to us, in the autumn of 1840, then in flower. Its appearance, however, did not give us a favourable impression of its value; and it was then divided, part being put into the open ground, and the remainder potted, and placed in a cold frame. In the present summer, 1841, we were agreeably surprised by the luxuriant growth of that part of it which had stood out during the winter. In the months of July and August it attained the height of four feet, and flowered luxuriantly, forming one of the most splendid objects of which our parterre could boast.

That portion of the plant which had been kept, during winter, in the cold frame, was turned out in May, but its growth was much inferior to that which had been continually exposed.

We are informed by Mr. Rendle's Circular, respecting the *Stachys speciosa*, that it was raised from Mexican seeds, and it is truly enough stated that it is altogether a handsome plant, and will be a great acquisition to the flower garden. It was exhibited, in 1840, at the summer exhibition of the Devon and Cornwall Horticultural Society, and had awarded to it the society's silver medal.

It has been supposed, and not without reason, that this plant is too nearly allied to *Stachys coccinea*, to admit of its separation. The dilatation of its leaf-stalks, the length of its peduncles, relative length of its style and filaments, and more bushy habit, are all at variance with the description of *coccinea*, still their prominent characters agree. Whether it prove distinct or otherwise, its beauty is not thereby deteriorated, nor its value as a hardy garden ornament lessened.

Before its leading stems have done flowering, it is advantageous to shorten some of them down to their strongest lateral shoots, which will be hereby strengthened. By attention to this, at different periods, a strong plant may be kept in great beauty for three months. It admits of being increased by cuttings of the stems, which will strike root under a hand-glass. The roots also may be divided; or, if about midsummer some of the flowering stems be cut down, to within an inch or two of the ground, and the soil drawn up to them, they will emit shoots, which will root into the soil, and may be conveniently separated in a few weeks. In addition to these modes of increase, it may be abundantly propagated from seeds.

HELIAN'THEMUM LIBANO'TIS.

ROSEMARY-LEAVED SUN ROSE.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
CISTACEÆ.

Native of Spain.	Height. 1 foot.	Flowers in June.	Duration. Perennial.	Cultivated in 1752.
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No. 810.

For the derivation of *Helianthemum* see No. 677.

Unlike the subject last described, which lifts its head in brilliant tints, our *Helianthemum*, humble almost as the silver daisy, and as modest too in its garb, forms a contrast not without its uses. Each gives to each relief. Nature herself adopts her contrasts, and half our pleasures live in changes. Well has the poet marked his landscape with opposing objects, —

“ The fountain’s fall, the river’s flow,
The woody vallies, warm and low ;
The windy summit, wild and high,
Roughly rushing on the sky !
The pleasant seat, the ruin’d tower,
The naked rock, the shady bower,
The town and village, dome and farm ;
Each give to each a double charm,
As pearls upon an Ethiop’s arm. —

} DYER.

It is difficult to distinguish specific differences between many *Helianthemums*, the *libanotis* has, however, a distinct character. It should be planted in light soil, in a very dry situation. Cuttings should be struck in sand, and have slight protection, during their first winter.

Don’s Syst. Bot. 1, 301.

EPIME'DIUM VIOLA'CEUM.

VIOLET-COLOURED BARREN WORT.

Class.
TETRANDRIA.

Order.
MONOGYNIA.

Natural Order.
BERBERACEÆ.

Native of Japan.	Height. 8 inches.	Flowers in Apr. & May.	Duration. Perennial.	Introduced in 1835.
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No. 811.

Epimedium, a name of uncertain application, used by the ancient Greeks.

Attention has been called to this genus through the species *macranthum*, which was generally made known in this country somewhat earlier than *viola-cum*, although both were received at the same time by our continental neighbours. Dr. Von Siebold, to whom the botanical world is much indebted for very industrious researches in Japan, introduced, in one collection, a hundred and sixty valuable new plants, including these *Epimediums*, to the botanic garden of the university of Ghent. Many of these have already been transmitted to this country, both by the friendly intercourse which subsists between the directors of British and continental public gardens, and also through the commercial activity of continental nurserymen, who duly appreciate the value of an English market for good plants.

Epimedium, in the borders, should be planted in very light soil, on a dry bottom; and in pots, in a mixture of loam, sand, and peat. It may be increased by dividing its roots, which is best effected in spring, just as it commences growing.

LIRIODENDRON TULIPIFERA.

TULIP TREE.

Class.

POLYANDRIA.

Order

POLYGYNIA.

Natural Order.

MAGNOLIACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
N. America	60 feet.	July & Aug.	Perennial.	in 1663.

No. 812.

The name, Liriodendron, is deduced from the two Greek words, LIRION, a lily; DENDRON, a tree. The flower, however, bears less resemblance to the lily than the tulip, on which the specific name has been founded.

This is one amongst the many exotic forest trees which have a strong claim on English taste, for more abundant patronage. It is well said by Phillips, that the vegetable world cannot present us with a more interesting object than a tree of such exalted stature, covered with a foliage so singular and beautiful, as is the Tulip Tree of North America. Its spreading branches give an extensive shade, whilst they are covered with an immensity of large and variegated flowers, that appear placed on the boughs, like so many porcelain vases, to catch the dews of heaven.

In Pennsylvania this tree is very abundant, and in height and thickness is scarcely excelled by any inhabitant of the forest. It has been observed with a trunk exceeding thirty feet in circumference, and its height more than a hundred and thirty. In our own country many specimens

approach a hundred feet in height, with trunks of from two to three feet in diameter, and flower every year, sometimes producing seed. Mr. London, in his *Arboretum Britannicum*, has given the height of Tulip Trees, as now growing in various parts of Great Britain, from which we may anticipate that, on an average, at ten year's growth, it may be expected to attain fifteen feet; at twenty years old, thirty feet; at forty years old, fifty feet; and at seventy years old, seventy feet. The largest British specimens will be found at Claremont, Syon, Wolverton Hall, Longleat, Carclew, Maeslough Castle, Croome, Elvaston Castle, Trentham; Hopetown, Scotland; and Shelton Abbey, Ireland.

The timber produced by our present subject, is, from its fineness of grain, durability, and lightness, employed in America for various purposes, as rafters and joists, shingles for covering buildings, doors, and all sorts of turnery.

The Tulip Tree is usually propagated from seeds, which are annually sent from America to this country; but when access can be had to a flowering tree, it would be desirable that the experiment be tried of raising it from cuttings of the flowering branches; these, it is probable, would flower when of much smaller size than trees raised from seeds. It is frequently observed that seedling house-plants grow higher, and are much older before they produce flowers, than the same species when propagated as now suggested, from cuttings of flowering branches. A further inducement to try this method of increase, exists in the probability that it has never been attempted.



Mimulus roseo-cardinalis.

42



Campanula barbata.

72



Cytisus polytrichus.

29



Cardamine trifolia

MIMULUS ROSEO-CARDINALIS.

SCOTCH HYBRID MIMULUS.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Hybrid Origin.	Height. 18 inches.	Flowers June to Sep.	Duration, Perennial.	Raised in 1840.
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No. 813.

The name of this genus is deduced from the Greek, MIMO, a monkey, or masked actor. It is by no means certain on what account the name was given to a plant by the ancients; Linneus, however, may be supposed to have hereby alluded to the gaping corolla of the genus. The specific appellation, roseo-cardinalis, is a compound, indicating that this hybrid variety has arisen from the union of the two species — *Mimulus roseus*, and *Mimulus cardinalis*. It is true that this combination of terms produces long names, but the advantage arising out of the practice, by the indication of the origin of such plants, when this is known, is too obvious to admit of a question. This method of naming we first proposed, under No. 385, in describing an interesting hybrid *Potentilla*, raised in our own garden. The practice is, we are glad to observe, now adopted by botanists generally; although amongst nurserymen and gardeners human nature seems to display itself in the exhibition of desire for immortality; for here we usually see those plants which may be considered their own children, introduced to public notice under their own family

cognomen. Industrious cultivators deserve to be encouraged and distinguished, for to them the scientific botanist owes an immense debt of gratitude; but we think it would be preferable that the English name only of plants should be devoted to this purpose of commemoration.

In the year 1837 several varieties of *Mimulus* were raised in the Bury St. Edmunds Botanic Garden, and the best amongst them was published in the *Botanist*, under No. 51, as Hudson's Hybrid *Mimulus*; but it is quite distinct from the present very handsome one, which we shall distinguish as the Scotch variety of *roseo-cardinalis*, it having been originated in the vicinity of Edinburgh, whence we received it in 1840. The flower of the present plant is altogether of a deeper colour than that of the Bury garden; the spotted throat of the latter being replaced by a deep crimson tint, but the lobes of the corolla are more reflexed, as in *cardinalis*. This new variety has already been introduced to the London nurseries, in some of which it has been called *atro-rosea*, and in others *Maclearii*. In 1842 it will, without doubt, be met with in many country collections.

The Rev. Professor Henslow has paid considerable attention to hybrid plants, and in the spirit of true philosophy esteems the enquiry into the laws of their variation one of high interest. To forward the acquisition of information regarding those laws, the Professor has drawn up a set of questions, which should be in the possession of every cultivator, and which we will shortly annex to the *Botanic Garden*, for the benefit of our subscribers.

CAMPANULA BARBATA.

BEARDED BELL-FLOWER.

Class.
PENTANDRIA.

Order
MONOGYNIA.

Natural Order.
CAMPANULACEÆ.

Native of Italy.	Height. 18 inches.	Flowers in June, July.	Duration Perennial.	Introduced in 1752.
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No. 814.

For the derivation of the word *Campanula* see No 130.

This is so extensive a genus, and containing many species so very ornamental, that we have had several opportunities of calling attention to them generally; still it will be felt as necessary that the best of them should be introduced individually, or their precise character will be unknown. Some of the large and rampant species are fit only for shrubberies and secondary situations; the small ones only for pots or artificial rock-work, whilst a numerous class present themselves as suitable ornaments for borders, mounds, &c., amongst which *Campanula barbata* may be reckoned. It is less leafy in its flower stems than most of those of similar habit, and bearing its bells, as it does, in regular order, it becomes as desirable an ornament as any of those species which can boast only a pale colour.

It requires no particular attention in culture, excepting that in exposed situations a short support to its flower stems may be desirable, to prevent its being injured.

Don's Syst. Bot. 3, 754.

CYTISUS POLYTRICHUS.

MUCH-HAIRED CYTISUS.

Class.
MONADELPHIA.

Order.
DECANDRIA.

Natural Order.
GENISTACEÆ.

Native of Tauria.	Height. 2½ feet.	Flowers in May, July.	Duration. Perennial.	Introduced in 1818.
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No. 815.

Cytisus, named after a Greek town, see No. 452.

The value of this genus has rarely been duly appreciated by the possessor of a shrubbery and ornamental grounds. It is true we occasionally see a solitary standard of the *Cytisus purpurea*, and perhaps of another species or two, marking the corners of a parterre, or the termination of a border; but it must be admitted that the various hardy species of *Cytisus* are capable of yielding a striking effect in the foreground of shrubberies, or in clumps of shrubs on a lawn. *Laburnum* stocks might be obtained without care or exertion, for they spring up spontaneously under the old trees; and if these be planted out, and in due time grafted, of various heights, from two to six feet, with *Cytisus purpureus*, and its white variety; *wolgaricus*; *argenteus*; *albus*; the species now figured; and numerous others, they will become materials in the hand of the landscape gardener, of more than common worth.

Cytisus polytrichus as a low shrub also, with its silvery foliage, and delicate flowers, produces a very pleasing effect, and requiring little attention.

Don's Syst. Bot. 2, 156.

CARDAMINE TRIFO'LIA.

THREE-LEAVED CUCKOW-FLOWER.

Class.
TETRADYNAMIA.

Order.
SILIKUOSA.

Natural Order.
CRUCIFERÆ.

Native of Switzerland	Height. 4 inches.	Flowers in Mar. & Apr.	Duration. Perennial.	Introduced in 1629.
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No. 816.

Cardamine is deduced from the Greek, *CARDIA*, the heart; and probably was intended to indicate that the plant to which the name was originally applied possessed cordial properties.

The introduction of this plant to England is distinctly marked by Parkinson, who says, in his interesting work, the *Paradisus Terrestris*, "It was sent me by my especial good friend, John Tradescant, who brought it amongst other dainty plants from beyond the seas, and imparted a root thereof to me." The compact evergreen tuft of trifoliate leaves which this plant forms, we have always considered to be a desirable ornament to artificial rock-work. Its leaves grow compactly together, and cover the earth; as in summer we see the wood-sorrel, on the bank of a shady lane, sheltered by decaying roots and leaves.

Whether grown on the north or south side of a large stone, on rock-work, we find it flourish equally well, and always more green and fresh than if in the open border. A little peat, and also sand, if the soil be stiff, mixed in the garden earth, encourages its luxuriance.

Don's Syst. Bot. 1, 168.





Loasa Pentlandica

50



Clematis calycina

51



Penstemon pilosa



Dianthus Fischeri

52

LOASA PENTLANDICA.

PENTLAND LOASA.

Class.
SYNGENESIA.

Order.
ÆQUALIS.

Natural Order.
LOASACEÆ.

Native of S.America.	Height. 3 feet.	Flowers in Aug. & Sep.	Duration. Perennial.	Introduced in 1840.
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No. 817.

The name, Loasa, is supposed to have been founded on that of a Spanish botanist ; this is not, however quite certain : the original spelling of the word by Adanson was Looza. Mention of this occurs in the manuscripts of the now lamented David Don, who has been for many years Librarian to the London Society, and also Professor of Botany at King's College, London. Since our last publication he has paid the debt of nature, having spent a life of activity and usefulness, wholly devoted to the science of botany.

Seeds of this newly-introduced and singular species of Loasa were first received in this country by the Hon. and Rev. W. Herbert, from Mr. Pentland, after whom it is named. Some of these were presented to Messrs. Whitley and Osborn, nurserymen, of Fulham, who inform us that the plant is perennial ; we had supposed it to be annual only, and as as such it may, doubtless, be cultivated ; the seeds being sown early in the spring, in a hotbed. Mr. Wheeler, of Warminster, obligingly supplied us with the specimen represented, with whom it grew against a wall and flowered luxuriantly.

CLEMATIS CALYCI'NA.

MINORCA VIRGIN'S-BOWER.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of Minorca.	Height. 12 feet.	Flowers Feb & Mar.	Duration, Perennial.	Introduced in 1783.
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No. 818.

The twiggy habit of this genus of climbing plants furnished it a name; whilst the native country of the species under consideration has given its title as a common distinctive appellation. The plant was introduced long since, to the Royal Garden at Kew, by Andre Thouin, late Professor of Agriculture in the Jardin des Plantes, of Paris; and editor of the agriculture part of *Encyclopedie Methodique*; a gentleman who, says Sir J. E. Smith, "ranked amongst the best and most philosophic cultivators of this or any age."

This species of *Clematis* is most generally met with in the greenhouse, but when planted against a wall, in a sheltered situation, and dry soil, is found to bear our winters without injury. It is evergreen, and its early habit of flowering is somewhat remarkable in the genus to which it belongs. Its delicately spotted flowers come forth whilst frost and the sun's feeble rays contend for the mastery—as if they thought of their native breezes of the Mediterranean, and became impatient of the icy grasp of a British winter. We are forcibly reminded of J. G. Percival's beautiful lines on this

subject — “Escape from Winter,” who says —

“O, had I the wings of a swallow, I'd fly
Where the roses are blossoming all the year long;
Where the landscape is always a feast to the eye,
And the bills of the warblers are ever in song;
O, then I would fly from the cold and the snow,
And hie to the land of the orange and vine,
And carol the winter away in the glow,
That rolls o'er the evergreen bowers of the line.

Indeed, I should gloomily steal o'er the deep,
Like the storm-loving petrel, that skims there alone;
I would take me a dear little marten to keep
A sociable flight to the tropical zone;
And there we would stay, till the winter is o'er,
And April is chequered with sunshine and rain —
O, then we would fly from that far distant shore,
Over island and wave, to our country again.

How light we would skim, where the billows are rolled
Through clusters that bend with the cane and the lime,
And break on the beeches in surges of gold,
When morning comes forth in her loveliest prime!
And when from the breast of the ocean would spring,
Far off in the distance, that dear native shore,
In the joy of our hearts we would cheerily sing,
“No land is so lovely, when winter is o'er.”

Clematis calycina is desirable from its evergreen habit, as well as for its delicately spotted flowers, which are unlike others of its congeners,

It should, as we have before observed, be trained to a wall, and planted in a tolerably dry loamy soil. It is the most readily increased by layers, which should be laid down in spring, when the young shoots are somewhat ripened.

PERNETTIA PILOSA.

PILOSE PERNETTIA.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of Mexico.	Height. 6 inches.	Flowers in July.	Habit. Shrub.	Introduced in 1829.
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No. 819.

The name of this genus is founded on that of Dom Pernetty, who wrote an account of a Voyage to the Falkland Islands.

Pernettia pilosa was first published by Dr. Graham, as a species of *Arbutus*: but on further acquaintance it has proved to belong to *Pernettia*, but very nearly allied to *Andromeda*. Mr. Cameron, Curator of the Birmingham Botanic Garden, favoured us with a growing plant of it, which we observe is quite hardy, and a very free flowerer. Its berries, Mr. Cameron has noticed, grow through the winter, a circumstance we have not had an opportunity of witnessing. It is a low close-growing shrub, to which, from its size, a place should be allotted in the front of the shrubbery, or American ground, amongst the smallest species of *Andromeda*, *Kalmia*, *Erica*, &c.

The *Pernettia pilosa* is usually planted in peat, or a mixture of peat and loam; it appears, however, to grow very well in turfy loam. It may be increased by layers, or by cuttings; the former method is the most convenient, as well as productive of the strongest plants.

Don's Syst. Bot. 3, 837.

DIANTHUS FISCHERI.

FISCHER'S PINK.

Class.
DECANDRIA.

Order
DIGYNIA.

Natural Order.
CARYOPHYLLÆ.

Native of Russia.	Height. 18 inches.	Flowers in July.	Duration Perennial.	Introduced in 1820.
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No. 820.

The derivation of this generic name will not fail to present itself to the memories of our readers. Fischeri is adopted as a specific appellation after Doctor Fischer, the director of the Botanic Garden at St. Petersburg.

This is a tall, upright-growing, handsome Dianthus; suitable as an ornament to the flower garden, and sweet-scented for the bouquet. Many desirable flowers, possessed of great beauty, are lowered in general esteem, by comparison with nearly-related species; and so it may happen with the Dianthus Fischeri. A single blossom of it can have no pretension to compete with the showy Carnation, or common Pink, as met with in every-body's garden; but these it should be remembered are the children of art as well as of nature: neither the one nor the other, in its natural state, is so handsome a plant as Dianthus Fischeri.

This Dianthus, like most of its family, delights in a rich light loam, and dry situation. It may be increased by cuttings and layers; seeds are also sometimes ripened. A reserve plant should be kept in a cold frame.

Don's Syst. Bot. 1, 396.



The first part of the paper deals with the general principles of the method of analysis of the data obtained from the study of the human skeleton. It is shown that the method is based on the assumption that the human skeleton is a complex system of interrelated parts, each of which has its own function and is influenced by the environment. The method of analysis is based on the study of the relationships between these parts and the environment. The second part of the paper deals with the application of the method to the study of the human skeleton. It is shown that the method can be used to study the changes in the human skeleton over time and in different environments. The third part of the paper deals with the results of the study. It is shown that the method can be used to study the changes in the human skeleton over time and in different environments. The fourth part of the paper deals with the conclusions of the study. It is shown that the method can be used to study the changes in the human skeleton over time and in different environments.



Clematis tritemata.

59



Ulex Hibernica.



Pulmonaria maritima



Linnaea borealis.

CLEM'ATIS TRITERNA'TA.

TRITERNATE VIRGIN'S BOWER.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration,	Introduced
Uncertain.	12 feet.	June.	Perennial.	in 1800.

No. 821.

The derivation of the name, Clematis, has been previously mentioned. The English appellation, Virgin's Bower was, doubtless, given in allusion to the use made of the shrub; whilst that of Traveller's Joy, which is more immediately applied to our English plant—the Clematis vitalba, Gerard himself confesses to have first adopted. He says, “It is called commonly Viorna quasi vias ornans, of decking and adorning ways and hedges, where people travel, and thereupon I have named it the Traveller's Joy.

Climbing and twining plants are always acceptable in the ornamental garden, inasmuch as, by proper management, they may be advantageously employed for ornamenting beds, creeping over rock work, and covering walls, pales, or trellis-work. Also, by training them to vase, or umbrella-shaped, frames, in the parterre, the centres of mounds, or on turf; or, even by simply tying them to stakes, with or without cross pieces, they may be rendered gay and pleasing.

Clematis triternata is most easily increased by layers of the young wood, and prefers a light soil.

U'LEX HIBER'NICA.

IRISH FURZE.

Class.
MONADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Ireland.	Height. 3 feet.	Flowers in May.	Duration. Perennial.	Inhabits dry pastures.
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No. 822.

The name of this genus is said to be derived from a Celtic word, in allusion to its spines or sharp points. The French name, *ajonc*, has reference to the same idea.

The plant which we have now to notice is sometimes called *Ulex strictus*, but was first botanically described by the late David Don, under the name we have adopted, and as a species distinct from *Europæus* and *nanus*. It flowers very sparingly, but it might be known at sight from its peculiar mode of growth; which certainly is not elegant, although such as the florist may sometimes avail himself of with advantage. Each plant becomes a compact formal round tuft, as sketched on our plate, and the flowers are borne on short straight upright branches, which appear like distinct subjects, grown through a bed of moss.

It has been strongly recommended as an agricultural plant, cattle and sheep being very fond of its young succulent shoots; and for such a purpose it may be increased, to any extent, with the greatest facility by layering, at any season of the year. It flourishes in a light soil.

Don's Syst. Bot. 2, 148.

PULMONARIA MARITIMA.

SEA LUNGWORT.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
BARAGINACEÆ.

Native of Britain.	Height. 1 foot.	Flowers in June, July.	Duration, Perennial.	Inhabits Sea shore.
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No. 823.

Pulmonaria is a name founded on the belief, amongst ancient herbalists, that the *Pulmonaria maculata* was intended by nature as a remedy for pulmonary complaints. Opinions regarding the medicinal virtues of herbs were frequently drawn from their external characters; thus, the idea of the plant above named, being salutary for complaints of the lungs, was supposed to be indicated by the spots on its leaves, which resemble those on the lungs of consumptive patients.

The *Pulmonaria maritima* is a remarkably pretty plant when well established, and displaying its pink buds and blue flowers amongst its glaucous grey foliage. It is rarely seen in cultivation, although a British plant, inhabiting sandy sea-coasts in the north of England, and in Scotland, where it is a great ornament.

It is best grown on rock-work, where the surface can be kept dry, small stones placed round its stems, and a good depth of very sandy soil provided for its long fleshy roots to run into. Here it should remain undisturbed, which is essential to its successful culture. Increased from seeds.

Don's Syst. Bot. 4, 320.

LINNÆA BOREA'LIS.

NORTHERN LINNEA.

Class.
DIDYNAMIA.

Order
ANGIOSPERMA.

Natural Order.
CAPRIFOLIACEÆ.

Native of Scotland.	Height. 3 inches.	Flowers in May, Aug.	Duration Perennial.	Inhabits dry stony places.
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No. 824.

There is not, perhaps, a generic name in the entire of botanical nomenclature, which can excite a sentiment of admiration and respect amongst naturalists equal to that now before us. Linneus, although his systems of classification, as respects both the vegetable and animal Kingdoms, may now be, in a considerable degree, superceded, stepped farther in advance of his contemporaries than has any naturalist amongst his successors.

The humble plant in question, 'it appears by Linneus's journal of his Tour to Lapland, was chosen by himself to commemorate his own name, when he gathered it at Lyksele, May 29, 1732. Former botanists had called it *Campanula serpyllifolia*; but Linneus, prosecuting the study of vegetables on the only certain principles,—the structure of their parts of fructification, soon found this to constitute a new genus. He reserved the idea in his own breast, till his discoveries and publications had entitled him to botanical commemoration; and his friend Gronovius, in due time, undertook to make this genus known to the world. It was published by Linneus himself, in

the Genera Plantarum, and Flora Lapponica, and also mentioned in his Critica Botanica, as 'a humble, despised, and neglected Lapland plant, flowering at an early age' like the person whose name it bears.

The *Linnæa borealis* is not without its due share of reputation as a medicinal plant. 'An infusion of the leaves, with milk, is esteemed a specific among the Swedes, in rheumatic and sciatic disorders.' The inhabitants of West Bothnia cure painful complaints in the feet of their sheep with a cataplasm or fomentation of this herb. The smoke of it, when burnt, is thought by the Norwegians beneficial in the cure of the scarlet fever, and its decoction in the itch.

It is a native of dry, stony, mossy ancient, fir woods, in Sweden, Siberia, Russia, Switzerland, and North America. Scotland also claims it as one of her offspring.

From its associations this plant has always been regarded with more than common interest; and the more so from its rarity, which has arisen merely from the proper method of cultivating it not having been understood. This induced us to publish in the Auctarium, section 193, directions by which it may be grown in luxuriance; the chief points of which are, to obtain good peat, and as the plant extends itself, to peg down and partially cover its creeping shoots. Although the flowers are small, a healthy patch of the plant, in a cool corner of the garden, is quite a desideratum, and the perfume of the flowers in the evening, is not one of its least important recommendations.





Rosa microphylla.

22



Eibionema heterocarpum.



Helianthemum procumbens.



Lobelia celestis.

23

ROSA MICROPHYLLA.

SMALL-LEAVED ROSE.

Class.
ICOSANDRIA.

Order.
MONOGYNIA.

Natural Order.
ROSACEÆ.

Native of E. Indies	Height. 4 feet.	Flowers in August.	Duration. Perennial.	Introduced in 1823.
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No. 825.

As all nations agree in their admiration of the Rose, so also have they agreed, to a considerable extent, in adopting for it a similar name; founded, as it appears to be, on the Celtic RHOS.

This small-leaved, or rather small-leafleted, Rose, is one amongst the many hundreds of the same attractive family which can never escape the observation of any, who possess the slightest regard for the vegetable part of this world's beauty—for the works which occupied its all-wise Originator on the third day of creation. We would not libel a single individual, even the most ignorant of mankind, by supposing he could pass by and wholly disregard the beauty of the Rose. The veriest boor, amongst us, would, however, step forward and display his nosegay, to exculpate human nature from such aspersion.

The *Rosa microphylla* has an evergreen shining foliage, which, independently of its showy flowers, makes it desirable. It has the habit of the Macartney Rose (*Rosa bracteolata*), and Mr. Rivers reasonably suggests, that it may be a Chinese hybrid of such species. Italian seeds of it, under

his culture, have produced several very distinct varieties, partaking as much of the Macartney Rose, in habit, as of the parent, which tends to strengthen the opinion advanced above. Lindley states, however, that on examination of specimens, which were received from Dr. Wallieh, by Mr. Lambert, he found it more nearly allied to *Rosa sericea* than to *braeteolata*.

The Macartney Rose, and the present small-leaved species, with the varieties which have been raised from them by seeds, form a distinct class in the flower garden. The best seedling of the Macartney, is the *Maria Leonida*; and of *microphylla*, the *alba odorata*; some others are too tender for out-of-door cultivation.

It has been usual to recommend a dry, raised, open, border of rich soil, for the growth of this Rose. Such description of border will be advantageous, but instead of full exposure, we advise that it be trained to a south wall, where it will form one of the finest objects of the garden, in August and September. Mr. Rivers, who may be considered high authority in these matters, says that to see these very curious Roses bloom in perfection, they should be budded on short stems of the Dog Rose, and treated as the Tea-scented Roses; that is, take them up in November, and lay their roots in damp mould, till March, in a shed, then replant them in the borders, pruning off all dead and superfluous shoots; and they will bloom freely, either in pots or in the flower borders, and form delightful little plants, quite unique in their characters and appearance.

ÆTHIONE'MA HETEROCAR'PA.

VARIOUS-PODDED ÆTHIONEMA.

Class.
TETRADYNAMIA.

Order
SILICULOSA.

Natural Order.
CRUCIFERÆ.

Native of Uncertain.	Height. 6 inches.	Flowers in August.	Duration Annual.	Introduced in 1841.
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No. 826.

The Greek AITHO, to scorch, and NEMO, a thread or filament, are the words from which, there is but little doubt, the present generic name was deduced. It seems to allude to a burnt appearance of the stamens.

At No. 334, we gave a figure of *Æthionema membranacea*, a pretty low border perennial, which is very desirable in a dry and shady situation, but it does not bear exposure on wet or stiff soil in winter. The present very singular little subject is an annual, therefore it presents none of the difficulties of preservation. Mention of it was made in the St. Petersburg Catalogue of seeds, for 1837; but we believe that it was not introduced to this country prior to the spring of 1841, when seeds were received at the Birmingham Horticultural Society's garden, from Berlin; from which plants were raised by Mr. Cameron, and obligingly handed to one of our artists (Mr. Mills).

Although its flowers are very diminutive, its low stature renders it a suitable plant for the front of flower compartments; and the dense growth of its singular silicles, gives it a pleasing effect.

HELIANTHEMUM PROCUMBENS.

PROCUMBENT SUN-ROSE.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
CISTINEÆ.

Native of S. Enrope.	Height. 6 inches.	Flowers in June, July.	Duration, Perennial.	Introduction Uncertain.
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No. 827.

Helianthemum, for derivation of name, see No. 574.

The brilliant yellow flowers of the *Helianthemum procumbens*, are similar to those of our indigenous species, the *Helianthemum vulgare*, than which no prettier trailer is claimed by the British Flora. Whether amongst cultivated gaieties in the garden, or luxuriating on its native banks of chalk or gravel, it is equally a pleasing little object. The *Helianthemum procumbens*, which, by the bye, is a rather scarce plant, has a character in which it varies materially from *vulgare*, and from most others of the genus; we allude to its heath-like foliage, which has a neat effect, when growing in bushes amongst artificial rock-work; or on a raised stone border, which may be formed in any garden without appearing intrusive; and is useful as a dry situation for such plants as are rather tender.

Helianthemum procumbens should be planted in a light sandy soil, and may be increased both by cuttings of the young wood, or by seeds, which are sometimes ripened. Young plants kept, during winter, in pots, and turned out in May, flower the most freely.

LOBELIA CÆLESTIS.

HEAVENLY LOBELIA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
LOBELIACEÆ.

Native of N.America	Height. 2 feet.	Flowers in June, Oct.	Duration, Perennial.	Introduced in 1831.
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No. 828.

Lobelia, named after a French botanist of the sixteenth century.

Lobelia cœlestis is nearly related to Syphilitica, but its flowers are of brighter colour, and the plant not so hardy; it is a species established by Nuttall, and by him sent to this country. In the second volume of the second series of Sweet's Flower Garden, another Lobelia, of somewhat similar character, was published under the name of colorata. It would be desirable that these three be cultivated together, for critical comparison.

Several hybrid varieties of Lobelia have of late been raised, which are worthy of cultivation. They are chiefly between Syphilitica and the red species—cardinalis, fulgens, and splendens. In the catalogue of the Messrs. Pope, of Handsworth, we observe the names of several varieties which have favourable mention for the beauty of their flowers, and fine growth, as Williamsii, Oldfordiensis, and Millerii.

Lobelia cœlestis flourishes in peat, or a mixture of peat and loam. Probably it would, like the red species, succeed still better in pots, with pans of water, as explained under No. 73.

Don's Syst. Bot. 3, 706.

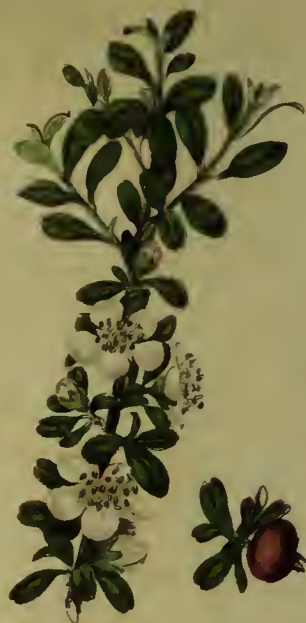






Impatiens glanduligera.

1/2



Cotoneaster microphylla.



Paeonia edulis.

1/2



Teucrium canum.

IMPA'TIENS GLANDUL'GERA.

GLANDULAR BALSAM.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
BALSAMINACEÆ.

Native of India.	Height. 12 feet.	Flowers in Autumn.	Duration, Annual.	Introduced in 1839.
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No. 829.

On the peculiar habit of plants their names are sometimes judiciously founded; hence the name *Impatiens*, and also *Noli tangere*, or *Touch-me-not*, appellations by which this genus is distinguished. The elasticity of its ripe fruit, which flies open, we may truly say, with great impatience, on being slightly touched, is familiar to most of our readers.

The genus *Impatiens* promises to be one of great interest, when more of its fine species are obtained, and many more may be expected; for, says Dr. Lindley, in the *Botanical Register*, "India swarms with species of this beautiful genus, all of which deserve the care of the cultivator." According to Dr. Wight, as stated in the *Madras Journal*, at least one hundred species occur in those districts from which Roxburgh described only three. Forty-seven species are named by Wallich from Silhet, Pandooa, Nepal, and the Peninsula, and multitudes occur in Ceylon, and the islands of the Indian Archipelago. He further mentions a curious circumstance in reference to the species inhabiting different parts of India; which is, that most of the species from the colder regions of the Himalaya

mountains correspond with the European *Impatiens*, *Noli tangere*, in the form and dehiscence of their capsules; that is, they split from their base, rolling the segments towards the apex; while those of the warmer regions split from the apex, and roll their segments towards the base. This difference of habit between those of India Proper and the Himalayan forms, is well worthy of notice, as it shows that the affinity which exists between the flora of the latter, and that of Europe, is stronger than between it and the Indian, and extends to even this most purely tropical genus.

Four species of *Impatiens* have been raised in the London Horticultural Society's garden, from seeds sent to it by the East India Company, viz., *Longicornu*, *Tricornis*, *Macrochila*, and *Glanduligera*, the latter of them, which we now figure, being the largest — a splendid plant indeed, having grown to the height of twelve feet in little more than three months. For the specimen figured we are indebted to our friends of the Birmingham Garden.

The seeds of *Impatiens glanduligera* must be sown on a hotbed, in spring; and when the plants come up they should be transplanted into small pots, singly, and receive progressive shiftings, until the beginning of May, at which time, after having been gradually hardened, they may be turned out of the pots, with the balls of earth entire about their roots, into the open ground, where it has been made rich, and is rather moist. Its seeds should be gathered before it is quite ripe, or the elastic pods, impatient of their charge, will burst, and the seeds will be lost.

COTONEASTER MICROPHYLLA.

SMALL-LEAVED COTONEASTER.

Class.
ICOSANDRIA.

Order
DI-PENTAGYNIA.

Natural Order.
ROSACEÆ.

Native of Nepal.	Height. 4 feet.	Flowers in May.	Habit, Shrub.	Introduced in 1825.
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No. 830.

The generic name, Cotoneaster, is, says Dr. Lindley, a sort of barbarous word, signifying quince-like. The quince was called Contonea by Pliny, and aster, a corruption of ad instar, is used occasionally to express simile. Some of the Cotoneasters are not unlike the quince.

The beautiful evergreen shrub now figured, has slender branches, densely set with laterals and foliage, and best suited for training against a wall or trellis; or, being exceedingly hardy, it forms a delightful trailing shrub to spread amongst rock-work, where its white flowers in spring, and its bright cornelian-like berries in winter, reposing on a dense bed of shining deep-green foliage, produce an effect surpassed in interest by no plant that can be adopted for such use.

It will flourish in almost any soil, or in any situation, and is readily increased by layers, or by grafting it upon any of our free-growing species, or on the common hawthorn. Grafted on standards, either high or low, according to the situation they are intended to occupy, beautiful objects may be formed for planting singly.

Don's Syst. Bot. 2, 604.

PÆONIA EDULIS.

EATABLE-ROOTED PÆONY.

Class.
POLYANDRIA.

Order.
DIGYNIA.

Natural Order.
RANUNCULACEÆ.

Origin.	Height.	Flowers in	Duration	Cultivated
Hybrid.	3 feet.	June.	Perennial.	in 1548.

No. 831.

Pæonia is a name founded on that of a fabulous character of the ancient poets. It should be remembered that *edulis* and *albiflora*, are terms used synonymously, in regard to the species now under notice.

We have already published two varieties of *Pæonia edulis*, each of them double, and exceedingly handsome. The present single one, with which we have been favoured by the Messrs. Pope, of Handsworth, is at present rather rare, having been imported by them from the continent, where it was raised from seed. It is remarkable for the size of its flowers, and height of the plant, and is altogether the handsomest single white Pæony yet introduced to our gardens.

All the varieties of *Pæonia edulis* thrive best in a rich and rather strong soil; and to possess them in perfection, the plants should remain undisturbed for several years. When increase is required, it is readily obtained by division of the roots; and most of the single tubers, when cut from the main body, will become good plants. Remember, that their seeds should be sown as soon as ripe.

Don's Syst. Bot. 1, 66.

TEUCRIUM CANUM.

HOARY GERMANDER.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of Armenia.	Height. 2 feet.	Flowers in September.	Duration. Perennial.	Introduced in 1836.
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No. 832.

The origin of the word *Teucrium* is enveloped in doubt; it is, however, reasonably supposed to have been adopted after *Teucris*, the ancient name of a country in Asia. The Latin *canum*, signifying hoary or white, was adopted by Fischer and Meyer, in their Seed Catalogue of the Petersburg garden, in reference to the foliage or herb generally. It is not, however, so conspicuously applicable to this species of *Teucrium* as some others.

This plant was raised from Armenian seeds, in 1836, and its appearance amongst others of differently tinted foliage is advantageous; just as blocks of gypsum relieve the dull appearance of basalt and other dark-coloured stones, in artificial rock-work. Its flowers too, although not large, are of brilliant and pleasing tint.

It is, probably, quite hardy; but its scarcity has prevented its hardihood being sufficiently tested, therefore it has hitherto received frame protection during winter, and been turned into the borders during summer, where it flowers much finer than if kept in pots. Its roots seldom admit of division, for increase, but it may be propagated from cuttings.

Don's Syst. Bot. 4, 867.



Tropaeolum peregrinum

70



Gladiolus Colvilli

71



Hedysarum Caucasicum

72



Helemtas asphodeloides

73

TROPÆOLUM PEREGRINUM.

EXOTIC INDIAN CRESS.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
TROPÆOLACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. Granada.	6 feet.	July to Sep.	Perennial.	in 1810.

No. 833.

The generic name, *Tropæolum*, is less applicable to this plant than to the common species, its leaf bearing no resemblance to a shield, nor its flower to a helmet. See No. 427.

This is a free climber, and abundant flowerer; hence, for covering a trellis, wall, or spreading over ornamental wire-work, it is fully equal to its more delicate allies. It may be advantageously trained horizontally, or in fan-shape, on a wall; or it will run up the small branches of wall-fruit trees; and being of light foliage, it may be allowed to do so without injury thereby occurring to the tree. It is not supplied with tendrils for climbing, like the pea or vine, but nature, ever fertile in means to accomplish the ends required, has given long petioles to its leaves, and these it twists round the objects it meets with, and raises itself from the damp earth into sunshine, for preservation and display.

If its seeds be put, singly, into pots, they may be conveniently forwarded in a hotbed, and the plants being transplanted into the open ground in May, without breaking the balls of earth about their roots, they will flower abundantly.

GLADIOLUS COLVILLII.

COLVILL'S CORN FLAG.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Origin.	Height.	Flowers in	Duration	Raised
Hybrid.	18 inches.	July & Aug.	Perennial.	in 1824.

No. 834.

The sword-shaped leaves of this genus gave occasion for the name, from the Latin gladius. Colvillii is adopted, as a distinction, after the prevailing fashion of nurserymen.

This bulb originated in the nursery of Mr. Colvill, of King's Road, Chelsea, from seeds of *Gladiolus concolor*, the flowers of which had been fertilized with the pollen of *Gladiolus cardinalis*. We have observed it in cultivation for nearly twenty years, and, although of hybrid origin, it appears to be permanent, and continues as healthy as any natural species.

Sweet expresses a belief that the number of species of plants are daily increasing in the same manner, by natural means, as we increase them by artificial ones; and, also, that hybridization is so far under our command, that it is only to consider what colours or markings may be advantageously mingled, and flowers of greater beauty than those of either of the parent species may be produced. Sweet was a practical cultivator, and acute observer, but his sanguine temperament required the modification of true philosophy.

It has been the custom of some botanists to entertain a seeming contempt for double flowers and hybrid plants, because these appear to interfere with the convenience with which, according to some favourite method, they would desire to class all vegetable productions. Surely we ought rather to endeavour to make our system of classification adequate to the circumstances presented to us by nature, instead of quarrelling with the multitude and exuberance of her productions.

Plants which are raised between two varieties of the same species are, usually, fruitful, and are called cross-bred; but such as are raised between distinct species, and considered true hybrids, are, it is maintained by most botanists, unfruitful. We are inclined to a contrary opinion, and are quite sure that the pistils of most hybrids are perfect, and that fertilization may be secured by the pollen of a kindred plant; and their anthers also are sometimes perfect.

The *Gladiolus Colvillii*, like many of the hardier species of Cape bulbs, may be grown in perfection in the open borders. We have flowered it with as little care or management as the tulip; it is, notwithstanding, the better practice to prepare a border, at the foot of a south wall, with a light compost of loam, peat, and sand, where many species will not only flower well, but by having a covering of moss, tan, or straw, during winter, the bulbs may remain undisturbed. The safest plan, however, is to take them up in autumn, keep them dry in paper bags during winter, and plant them again in spring.

HEDYSARUM CAUCASICUM.

CAUCASIAN HEDYSARUM.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Caucasus.	Height. 2 feet.	Flowers in June & July.	Duration. Perennial.	Introduced in 1820.
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No. 835.

The two Greek words, EDUS, AROMA, signifying sweet, perfume, have here been compounded for a generic name; which, doubtless, by the ancients with whom it originated, was applied to an odoriferous plant; the common Fenugreek is supposed to be that plant, and from which the Hindoos are said to extract an oil which they use in their ointments.

We have already published three species of Hedysarum, all of them ornamental for the borders, requiring very little care at the hand of the cultivator. Although in its native alpine regions, the Hedysarum Caucasicum seldom grows above a foot or eighteen inches high, still, under culture in our gardens, and in rich soil, it will grow to nearly double that height; and is one amongst the most attractive of the genus; its racemes of flowers, thus lengthened by luxuriance, and elevated on long peduncles, become thereby more conspicuous than either of those previously noticed.

It may be divided for increase; or, as it ripens seeds, these may be sown, and if the seedlings remain undisturbed, their roots will penetrate deeply, and the plants be finer than if otherwise propagated.

Don's Syst. Bot. 2, 302.

HELO'NIAS ASPHODELOIDES.

ASPHODEL-LIKE HELONIAS.

Class.
HEXANDRIA.

Order.
TRIGYNIA.

Natural Order.
MELANTHACEÆ.

Native of N. America	Height. 18 inches.	Flowers in May & June.	Duration, Perennial.	Introduced in 1765.
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No. 836.

The Greek HELOS, a marsh, owns Helonias as its offspring.

This plant is an old inhabitant of our gardens, but there appears to be a variety of a somewhat different habit, which was raised by the Horticultural Society, from seeds sent home by Douglas, and which is figured in the Botanical Register, No. 1613. Of this variety Dr. Lindley says, "The natives, inhabiting the highlands of the Rocky Mountains, where it is abundant, weave their water-tight baskets out of its tenacious leaves. Since the time of Pursh, the plant used for this purpose, and the common American kind, have been considered different; but we are unable to detect the slightest mark, by which they may be separated."

Both varieties of this plant are handsome, particularly when left undisturbed till they become strong and vigorous, which they will do in three or four years, in a peat border, or in a mixture of peat, loam, and sand. It may be increased slowly by division of its roots; or, when strong, the crown of the plant may be divided.

Bot. Reg. 1613.



Dahlia glabrata

7/5



Sanfraga Maderensis

7/5



Tropaeolum minus

7/5



Funaria Sieboldiana.

7/5

DAH'LIA GLABRA'TA.

SMOOTH DWARF DAHLIA.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of Mexico.	Height. 3 feet.	Flowers in September.	Duration Perennial.	Introduced in 1840.
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No. 837.

Derived as the word Dahlia is, from the name of a Swede—Dahl, in which the letter *a* must be pronounced as in *father*, we again mention the impropriety of a prevailing pronunciation, as if the word were derived from Dale.

So popular as is THE Dahlia, that it cannot be doubted but the appearance of any new species will be interesting to the Dahlia-growing public. The species now figured may, perhaps, be thought an insignificant competitor with the splendid varieties of that so common in all gardens—the Dahlia *variabilis*; but it should be remembered that this last-mentioned species was scarcely more important in appearance when first brought to this country. Its splendour has arisen out of attentive culture, a circumstance which holds out perpetual encouragement to the cultivator of every sort of flower. "There can be little doubt," says Dr. Lindley, "that this, and Dahlia *Scapigera* will give birth to quite a new race of Garden Dahlias, in which dwarfness, so much to be desired, will not be an accidental deviation from a natural tendency to acquire a lofty stature, but will be a fixed habit, which may possi-

bly, and indeed probably, increase till varieties shall have been secured whose height, when in flower, will not exceed a foot." Should this anticipation be realized, the introduction of the Dahlia may indeed, extend even to the parterre of rarer beauties ; from which, by its gigantic growth, it is now completely excluded.

Like the Dahlia *variabilis*, or common garden species, the present one may be raised from seeds, in spring, to flower in the succeeding autumn. It need not be mentioned, that to sow the seeds early, that is, in the latter part of February, or beginning of March, and to hasten the growth of the plants by a hotbed, will be advantageous, by bringing them into flower, so as to secure the maturity of their seeds before the approach of winter.

It is desirable that in the future culture of this plant, improvement in its flowers should be effected. The probable means of doing so are two-fold—hybridization with the best varieties of the common species, a mode by which success would be almost certain ; and raising seedlings without hybridizing, in the hope of obtaining semi-double flowers, and from these, others of still more perfect formation—(or imperfect, as the vegetable physiologist may say, seeing that the transformation desired by the florist, is an intrusion on the law of nature.) Of the circumstances which produce this change in composite flowers—transforming the florets of the disk into the form of those of the ray, nothing is definitely known ; healthy growth, and the excitement of one flower by cutting off others near it, may probably forward the change.

SAXIFRA'GA MADEREN'SIS.

MADEIRA SAXIFRAGE.

Class.
DECANDRIA.

Order.
DIGYNIA.

Natural Order.
SAXIFRAGACEÆ.

Native of	Height.	Flowers in	Duration.	Cultivated
Madeira.	6 inches.	April.	Perennial.	in 1596.

No. 838.

The word *Saxifraga* is compounded from *saxum*, a stone; and *frango*, to break; but its application, by the ancient botanists, is uncertain.

This genus contains a multiplicity of interesting plants, nearly two hundred of which are already discovered, and by far the greater portion of them quite hardy: some are proverbially so; the *Saxifraga umbrosa*, for instance, obtained its name of London Pride from the luxuriance with which it grows and flowers in the smoky atmosphere of the metropolis. Phillips praises its beauty, and says that when viewed under a microscope, its "sprays seem frosted with diamonds." Grown in London, it can but excite the pity of the sensitive florist, clothed, as we have seen its sprays, with a robe of soot—its rosettes struggling to shine through its sombre leafy garment.

It was brought to England before 1596, but having been lost, has been lately re-introduced by J. Janson, Esq., Stoke Newington, by whose kind attention we were favoured with an original drawing of the plant, from the pencil of Mr. R. Kippist, Librarian of the Linnean Society.

Don's Syst. Bot. 3, 220.

TROPÆOLUM MINUS

SMALLER INDIAN CRESS.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
TROPÆOLACEÆ.

Native of Peru.	Height. 1 foot.	Flowers in July to Oct.	Duration. Annual.	Introduced in 1596.
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No. 839.

The meaning of the word Tropæolum will be found under No. 427. Its ingenious allusion to implements of war should not be forgotten.

Tropæolum minus has, of late years, been almost supplanted by its more rampant relative, the Tropæolum majus. The present species may be grown on the borders as a compact little bush, for if a shoot be inclined to run out too freely, if pinched off, it will keep the plant within due bounds; whilst majus is suitable only for a trellis, or for rambling over deformities. It was a great favourite with the old botanists, and as a specimen of their quaint style of description, we will copy Parkinson on this plant, who published his Garden of Pleasant Flowers, in 1629. It is not amiss, sometimes, to look back and contemplate by-gone days. "This flower is of so great beauty and sweetness withall, that my Garden of delight cannot be vnfurnished of it. This faire plant spreadeth it selfe into very many long trayling branches, enterlaced one within another very confusedly (yet doth it not winde it selfe with any claspers about either pole or any other thing, but if you will

haue it abide close thereunto, you must tye it, or else it will lye vpon the ground;) the leaues are smooth, Greene, and as round as the Penniwort that groweth on the ground, without any cut or incisure therein at all in any part, the stalkes whereof stand in the middle of each leafe, and stand at euery ioynt of the stalke, where they are a little reddish, and knobbed or bunched out: the flowers are of an excellent gold yellow colour, and growe all along these stalkes, almost at euery ioynt with the leaues, vpon pretty long foote-stalkes, which are composed of fiae leaues, not hollow or gaping, but standing open each leafe apart by it selfe, two of them, that be larger and longer then the other, stand aboue, and the other two that are lesser belowe, which are a little iagged or bearded on both sides, and the fift lowest: in the middle of each of the three lower leaues (yet sometimes it is but in two of them) there is a little long spot or streake, of an excellent crimson colour, with a long heele or spurre behind, hanging downe: the whole flower hath a fine small sent, very pleasing, which being placed in the middle of some Carnations or Gilloflowers, (for they are in flower at the same time) make a delicate Tussimussie, as they call it, or Nosegay, both for sight and sent."

The *Tropæolum minus* is readily raised from seeds, and where they have been shed in autumn, plants will often be found in spring. It is the parent of the double flowering variety, which is cultivated in the greenhouse, and propagated by cuttings; a plant, that for summer show in the borders equals, or perhaps excels, all other *Tropæolums*.

FUNKIA SIEBOLDIA'NA.

SIEBOLDT'S FUNKIA.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
HEMEROCALLIDACEÆ.

Native of	Height.	Flowers in	Duration,	Introduced
Japan.	1 foot.	June.	Perennial.	in 1830.

No. 840.

This genus was named after a botanist of Germany ; and its specific name, Sieboldiana, commemorates its discoverer.

To Doctor Sieboldt, the Japanese traveller, Europe is indebted for many splendid plants. These have been chiefly sent by him to the Botanic Gardens of Belgium, whence they have been received into our own country, partly through our public Gardens, and partly through our spirited nurserymen, many of whom have a regular correspondence with nurserymen on the continent, and who take care to obtain all newly-discovered valuable plants.

The present species of Funkia is by far the finest of the genus, both in flower and foliage. It was introduced as a greenhouse subject, but has proved to be quite hardy. It has much of the character of Funkia ovata (No. 596) excepting its colour ; in size it somewhat exceeds either of the species already known.

Our new species is of as easy culture as the old ones ; requiring only to be planted in a light friable garden soil.



Cistus psilosepalus.

70



Psoralea glandulosa

71



Paeonia edulis.

72



Draba aizoides

73

CISTUS PSILOSEP'ALUS.

SMOOTH-SEPALED ROCK ROSE.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
CISTACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
S. Europe.	2½ feet.	June, July.	Shrub.	in 1820?

No. 841.

The word, *Cistus*, is deduced from the Greek, in allusion to its seed vessel. See No. 449. *Psilosepalus*, also, is a word compounded from the Greek; *PSILOS*, signifying naked, alludes to the sepals of this species being unclothed or smooth; they are, however, distinctly ciliated. It is a pretty bushy plant, producing abundance of flowers about midsummer, and is perfectly hardy, in a light soil, and dry situation.

It is not very common for both generic and specific name to be drawn from the language of Greece; and perhaps it may be asked why thus exists our continual dependency on the Greek language. It may be answered briefly, on account of its superiority. Out of this superiority, as is truly stated by the Society of Dilettanti, mainly arose the exalted state, in respect both to literature and the arts of the ancient Greeks. Their language was originally formed upon a plan more perfect than any other ever spoken by man. Words are not only signs by which we communicate ideas to each other, but the counters by which we distinguish, arrange, and subdivide them

in our own minds; so that their being more or less perfect in their structure and analogy, contributes to render the understandings of those who use them more or less clear or confused. Hence, we are persuaded, that languages have considerable influence in forming natural character, though to what degree can never be ascertained in any particular instance, on account of the number of other causes which everywhere co-operate or obstruct. The peculiar and original character of that of Greece was extreme suppleness and flexibility, from which it naturally derives every other excellence that language can possess; for, by varying its termination to express every marked variation of time in action, or of mode in existence, it acquired at once degrees both of strength and melody, unknown to every other; and by the facility with which it joined one word to another it continually increased its stock in proportion to its wants, without breaking its harmony, or disturbing its regularity, by the adoption of uncouth or uncongenial sounds from other idioms. And, as the primitive words were struck out warm from the mind to express what they were meant to signify, they had in every instance a sound adapted to their sense, and were, therefore, rather characters of nature than signs of convention, not only giving force and originality to every sentence, but sustaining, with adequate foundation, the rich and complicated structure of melody which had been raised upon them.

Cistus psilosepalus may be increased from cuttings of the young wood. Plant in a light soil.

Don's Syst. Bot. 1, 300.

PSORA'LEA GLANDULO'SA.

GLANDULOUS PSORALEA.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSA.

Native of Peru.	Height. 4 feet.	Flowers in June, Sept.	Habit. Shrub.	Introduced in 1770.
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No. 842.

The Greek word PSORALEOS, signifies scurfy, and alludes to the scurfy appearance of the calyx or other parts of the plant.

We were favoured with this rather scarce shrub by Mr Cameron, curator of the Birmingham Horticultural Society's garden, where it has borne winter exposure in a sheltered situation. It is noticed by some authors as possessing the smell of rue; a quality which we could scarcely distinguish. It is called the Chilian Tea Plant, and an infusion of it is said to be used by the inhabitants of Chili as a common beverage. The dried leaf, when chewed for some time, produces a warm aromatic flavour, not unpleasant to the palate. The roots are considered purgative, and a cataplasm of the leaves healing.

Being a native of so warm a climate as Peru, we cannot expect this shrub to be perfectly hardy; therefore, if it be intended to be left fully exposed, during winter, a few cuttings of the young wood should be struck, in sand, under a bell-glass, about midsummer, and the young plants should have frame protection in frosty weather.

Don's Syst. Bot. 2, 204.

PÆONIA ED'ULIS.

Var. spectabile.

EATABLE-ROOTED PÆONY.

Class.

POLYANDRIA.

Order.

DIGYNIA.

Natural Order.

RANUNCULACEÆ.

Hybrid Origin.	Height. 3 feet.	Flowers in June.	Duration, Perennial.	Introduced in 1840.
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No. 843.

The newly-introduced Pæonies afford so much splendour in the garden, and that at a season somewhat previous to its chief gaiety, that we have been tempted to publish another variety, which also has been lately brought from the continent. It is, too, we believe, the largest flowering herbaceous Pæony hitherto brought to Great Britain, and, as Gerard would say, a gallant plant, and sweet withal. The impropriety of the name *albiflora*, or white-flowered, applied to this species, is sufficiently palpable. The odour of the variety called *fragrans* is that of the rose; this more nearly resembles that of the hawthorn.

With the species from which our drawing was made, we were favoured by the Messrs. Pope and Sons, of Handsworth, whose nursery usually includes most of the desirable novelties, in the hardy class of plants. It is said to have been raised from seed, in Belgium, and thence sent to this country, two or three years ago.

Strong soil is the best suited to Pæonies; it is favourable both to the size and number of their flowers.

DRA'BA AIZOI'DES.

AIZOON-LIKE DRABA.

Class.
TETRADYNAMIA.

Order.
SILICULOSA.

Natural Order.
CRUCIFERÆ.

Native of Wales.	Height. 3 inches.	Flowers in Feb. April.	Duration. Perennial.	Inhabits Rocks.
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No. 844.

The name, *Draba*, is of Greek origin, signifying acrid; a quality that is not prevalent in the genus which now bears the name. The similarity of this plant to the *Aizoon*, has obtained for it the specific name of *aizoides*. The *Draba* has been called *Whitlow Grass*; and it is remarked by Galen, that *Paronychia*, or *Whitlow Grass*, has the property of healing whitlows; but what he meant by *Paronychia* is now a riddle difficult of solution.

The species of *Draba* here figured, is an English, or rather Welsh, plant; having been found on the walls of a castle in that little peninsula of Glamorganshire, known as Gowerland, and, we believe, nowhere else; just as if it had been [an ally of *Eveon ap Collwyn*, against the tyrant *Jestin ap Gurgant*, and continued still to occupied a castle as a prize for its prowess.

A castle wall being its chosen residence, we should afford it a dry place, on artificial rock-work, where, in spring, it will be gay, and at all other times appear a neat tuft of pale-green foliage, forming little compound rosettes, held together by very slender stems.



Garrya elliptica.



Anemone ranunculoides.



Primula denticulata.



Salvia Tenorii

GAR'RYA ELLIP'TICA.

ELLIPTIC-LEAVED GARRYA.

Class.
DIOECIA.

Order.
TETRANDRIA.

Natural Order.
GARRYACEÆ.

Native of California.	Height. 6 feet.	Flowers in October.	Habit. Shrub.	Introduced in 1828.
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No. 845.

This new genus of plants, when discovered by Douglas, in California, was named by him in honour of Nicholas Garry, Esq., Secretary to the Hudson's Bay Company.

It is a hardy evergreen shrub, which will be received with much pleasure into British gardens and shrubberies, as a companion to the *Laurustinus*, the *Arbutus*, and others of similar character. By botanists it has been regarded as an interesting addition to our Exotic Flora; forming, as it does, a distinct natural order — a link between *Cupuliferæ* and *Coniferæ*. It will be observed that our figure is of the male plant, this only having yet been discovered.

When sent home, by Douglas, it was the only *Garrya* known; but, since that time, Mr. Hartweg, the London Horticultural Society's collector, has transmitted seeds of another species — the *Garrya laurifolia*, which is considered a handsomer plant than *elliptica*. Mr. Hartweg's seeds were distributed amongst the fellows of the society, and, ere long, we hope to have a specimen of the plant for publication. Mr. Hartweg has discovered other

species, of this new genus, but of which we have not heard of the arrival of either plants or seeds.

It will be seen by these efforts of the London Horticultural Society, that through their collectors, they are daily adding to our catalogue of hardy plants; and for the incalculable amount of good which is, by this means, being effected, not this country alone, but every civilized country, owes gratitude to its members; for it must be confessed that the privileges accruing to them individually, offer but little gratification that can be founded on selfish considerations. No sooner are good plants received into its garden, and increase obtained, than they are distributed, not only in our own country, but to all parts of the world of which the inhabitants are sensible of the advantages of such accessions.

Such plants as will bear the rigour of our variable climate have, we are happy to state, always occupied much of the attention of the society, and will, we trust, continue to do so; for, as Mr. Loudon says, (*Gardener's Magazine*, 15, 147) "However interesting house plants may be, they can only be obtained by persons possessing large establishments; and it must be allowed that hardy plants, whether ligneous or herbaceous, useful or ornamental, are of most importance to the country in general; and, therefore, the introduction of these ought to be considered of paramount importance."

The *Garrya elliptica* is a free flowerer, and grows luxuriantly. It may be propagated by cuttings, or by layering, and succeeds well in stiff soils.

ANEMONE RANUNCULOIDES.

RANUNCULUS-LIKE ANEMONE.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of England.	Height. 6 inches.	Flowers in Mar. & Apr.	Duration. Perennial.	Inhabits Woods.
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No. 846.

The derivation of *Anemone* has been noticed.

Although there can be no reasonable doubt but the *Anemone ranunculoides* is indigenous to England, there is not, probably, one of our readers who has had the pleasure of collecting it from its native haunts. We say pleasure — perhaps, may have said ecstasy, and we fancy many of our readers will be sensible of the application of such expression, having felt nature's enchantment when looking, for the first time, on a rare and beautiful plant — long known by description, but now discovered in its own secluded habitat —

“Where I thought it delightful your beauties to find,
When the magic of Nature first breathed on my mind.”

Such felicity is reserved for the truly zealous naturalist — he who searches out the beauties of creation in their secluded avenues, and bears them home, in the triumph of his heart, as the choicest treasures of science.

The *Anemone ranunculoides*, when seen in well-grown patches, makes a pleasing appearance in spring. It will flourish in common soil, and may be increased by division of its tuberous roots.

SALVIA TENOREII.

TENORE'S SALVIA.

Class.
DIANDRIA.

Order.
MONOGYNIA.

Natural Order.
LAMINACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Italy.	2 feet.	May & June	Perennial.	in 1821.

No. 848.

Salvia, from the Latin *salvere*, to heal, is a name which has originated with the ancient botanists, founded on the salutary properties of the plant to which it was given. The common Sage, *Salvia officinalis*, is mentioned as possessing properties somewhat remarkable for resisting the putrefaction of animal substances; and the Chinese use it in the form of tea, and esteem it a useful tonic, beneficial in nervous affections.

Our present species is a showy hardy herbaceous plant, requiring but little attention. Mr. Bentham thinks it is identical with *Salvia pratensis*; but, although their botanical characters are so closely allied, their general appearance is distinct. If its flowering stems be cut down when its beauty has declined, but before the plant has been exhausted to the last degree, it will flower a second time in the same season. To this practice we have more than once alluded, on account of its being applicable to many herbaceous plants, and well worth attention.

Its management is simple; and abundance of increase may be obtained from seeds.

Sweet's Fl. Gar. 26.



Oxalis caprina



Primula amena.



Anemone Halleri



Andromeda floribunda.

OXALIS CAPRINA.

GOAT'S-FOOT WOOD-SORREL.

Class.
DECANDRIA.

Order.
PENTAGYNIA.

Natural Order.
OXALIDACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
C. G. Hope	18 inches	Mar. & June	Perennial.	in 1757.

No. 849.

Oxalis, see No. 433. *Caprina*, from *Capra*, the Goat; the shape of its leaves resembles a goat's foot. Each leaf of this genus is generally divided into three parts, and exhibits the phenomenon usually called the sleep of plants. Some remarks on these subjects will be found under No. 735.

Oxalis caprina we introduce as the first of our Window Plants, and consider it a pleasing subject for the purpose. In some parts of the country it is wholly unknown, whilst in others it will be met with in cottage windows, and sometimes in greater beauty than under the frame or greenhouse management of a good gardener.

It produces an exceedingly handsome show of flowers. Three or four bulbs, in a pot, throw up an abundance of flowering stems, for at the least two months, each scape bearing from a dozen to twenty flowers; and, as these open in succession, and continue some time in perfection, a mass of gaiety is the consequence. When the sun's cheerful rays of April and May fall on this plant, it excites pleasure, from an almost irresistible feeling that it is enjoying the genial warmth. Its flowers that

before were shut up as it were in sleep, and its leaflets closed and pendant, spread forth with a lively excitement that is difficult to separate from sensation.

The gardeners' mode of culture is this. In February, plant four or five bulbs in a small pot; when they produce foliage, and send their fibrous roots round the inside of the pot, transfer them, with the earth unbroken, into larger pots, sinking the ball nearly two inches in the fresh pot, and filling it up with compost. Repeat this three times, at proper intervals, still sinking the plants in the soil at each removal.

The lady who supplied us with the plant, from which our drawing was made, pursued a somewhat different plan, and which was eminently successful. She took a large flower-pot, and put at the bottom not more than two inches in depth of light rich earth and manure, off the top of her asparagus bed; on this she placed four or five bulbs, half their length in the soil, and half out. When they had grown an inch or two, she added a little of the same soil, and so she proceeded, adding soil as her plants grew and strengthened, till the pot became filled with soil, and finely covered with foliage. Water sparingly for the first month, after which the earth can scarcely be kept too moist,

Amongst the many novelties in the country we promise ourselves the pleasure of publishing some that will be very superior and showy window plants, from the genera of *Cereus*, *Mamillaria*, *Mesembryanthemum*, *Cytisus*, *Azalea*, *Fuchsia*, *Camellia*, *Chrysanthemum*, &c.

PRIM'ULA AMÆ'NA.

PLEASING PURPLE PRIMROSE.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of Caucasus.	Height. 3 inches.	Flowers in Apr. & May.	Duration, Perennial.	Introduced in 1823.
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No. 850.

Primula, sec No. 1 for derivation, &c.

We here indulge in the representation of another of the prettiest of spring ornaments,—the *Primula amæna*. Its first introduction to this country was from St. Petersburg, into Dr. Neill's garden, Canon Mills, Edinburgh.

Dr. Graham says, (Bot. Mag. 3252) “In its native station—the Caucasian Alps, it is described by Marschall Bieberstein, its discoverer, as having an umbel with from three to ten flowers; and a variety is noticed by Bieberstein in which the scape is wanting, the pedicels being all radical and single-flowered; another analogy if any were wanting, to confirm the opinion, that there is no specific distinction between *Primula vulgaris* and *Primula elatior*—our common Primrose and Oxlip.” This latter subject we have mentioned under No. 60.

Primula amæna is at present scarce; its increase having been chiefly effected by division of its roots; seeds may, however, be obtained by attention to their fertilization. It may be grown in pots or the borders, in light loam.

Bot. Mag. 3252.

ANEMONE HALLE'RII.

HALLER'S ANEMONE.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Switzerland	8 inches.	Apr. & May.	Perennial.	in 1816.

No. 851.

Anemone, from ANEMOS, wind. See No. 145.

This handsome species of Anemone is nearly related to Anemone pulsatilla; its flowers, however, are less nodding than those of pulsatilla, they are also less spreading. It is abundantly covered with long silky hairs, but in vain does the utilitarian ask — why? He may ask with the poet,

“ Why knows the Nightingale to sing ?
Why flows the Vine's nectarious juice ?
Why shines with paint the Linnet's wing ?
For sustenance alone ? for use ? ”

For use ? it may be again asked. No, not all for use. The bountiful hand of Nature is not confined merely to dispensing the objects of our necessity, she pours forth materials of pleasure every where around us, and pitiable is the lot of him who is incapable of enjoying them.

This truly beautiful Anemone requires but to be planted in a rich soil, and left undisturbed, to make a splendid show. The finest plants are raised from seed, which should be sown soon after it is gathered.

Don's Syst. Bot. 1, 15.

ANDROMEDA FLORIBUNDA.

BUNDLED-FLOWERED ANDROMEDA.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of N. America	Height. 3 feet.	Flowers in May & June	Duration. Perennial.	Introduced in 1812.
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No. 852.

Andromeda was a lady immortalized by the fabulists of old. She was the beautiful daughter of the King of Ethiopia, represented as bound to a rock to be destroyed by monsters, but rescued by Perseus and made his wife. It is supposed that the plain facts were, simply, that a sea captain fell in love with her and would have carried her off, but that another lover was preferred, who gained her as his prize. This fable, like many others of eastern origin,—beautiful in design and execution, may be compared to a splendid building,—towering to the clouds, erected as the residence of a favourite mouse.

The *Andromeda floribunda*, is readily known by its five-angled peculiarly shaped flowers; and its habits of forming those in autumn which expand in the spring. It is the finest, and one of the most scarce plants in the genus. It has been long in this country, but was, for many years, in the sole possession of the late Mr. Jenkins, nurseryman, of Regent's Park. It is quite hardy, should be grown in sandy peat; and may be propagated by layers, which will take two years in rooting. It ripens seeds.

Don's Syst. Bot. 3, 832.



Aesculus rubicunda.

1/2



Ornithogalum refractum.

2/3



Primula verticillata.

1/2



Campanula grande.

1/2

ÆSCULUS RUBICUN'DA

RUDDY HORSE-CHESNUT.

Class.
HEPTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ÆSCULACEÆ.

Native of N. America	Height. 12 feet.	Flowers in June.	Duration. Perennial.	Introduced in 1820.
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No. 853.

Æsculus is derived from the Greek ESCA, signifying nourishment; and is said to have been applied to a tree bearing an eatable fruit; eatable we may presume, by pigs, since Pliny says it was inferior to that of the common Oak. The tree must have been common at Rome, for in Pliny's Natural History, he mentions a grove there, called the Esculetum, on account of its being planted with Esculi. The want of botanical language by the ancients, leaves us here, as in most other instances, almost devoid of materials, even for conjecture what tree bore this name.

Every body knows the common species of Horse-chesnut — the Æsculus hippocastinum, and, in flower, a more splendid object is rarely afforded by the park or the forest. The tree, which we now introduce to our readers is very nearly allied to it; there is indeed, much probability that it is the offspring of that species. Its difference is little more than that which exists between the scarlet hawthorn and its white-flowering parent. When trees or shrubs are long and extensively raised from seeds, variations in them will always

occur, and it is by continued attention to propagation from the best varieties of each successive generation, that improvements have been obtained ; so great has been the change sometimes effected, that the parent is scarcely discoverable in the offspring. Many of our garden fruits and vegetables may be mentioned as examples. But the increase obtained from offsets, cuttings, grafts, and buds, never afford improvement ; they are literally but an extension of the parent plant, and perpetuate its qualities, both good and bad.

The *Æsculus rubicunda* is said to have been introduced from North America, but this is not quite certain, for we never have heard of its being traced to its introducer, it is quite as likely to have been a seedling variety produced in our own country. It has been universally admired, and Mr. Loudon in his most elaborate and inestimable work, the *Arboretum and Fruticetum*, pronounces it to be without doubt, the most ornamental sort of the genus. The tree is not of so vigorous growth as the common Horse-chesnut, but whether it will ultimately rival that species time has not yet allowed a proof. The largest tree mentioned in the work just quoted, is growing at Endsleigh Cottage, Devonshire, which was thirty feet high at the time of measurement, (1838) having then been planted eighteen years. It should be known to those who apply at nurseries for this tree, that it is called by different names, as *Æsculus rosea*, *carnea*, *coccinea*, and Whitley's scarlet.

It is usually propagated by being budded on the common species ; and grows in any good soil.

ORNITHOG'ALUM REFRAC'TUM.

REFRACTED STAR OF BETHLEHEM.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
LILIACEÆ.

Native of Hungary.	Height. 3 inches.	Flowers in May. & Jun.	Duration. Perennial.	Introduced in 1822.
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No. 854.

The meaning of the word Ornithogalum, as far as known, will be found under No. 732. It may be asked, why is this plant called refracted? The term, undoubtedly, is better known in optics than in botany; but is here used to mark the position of the peduncles. These will first be seen supporting the flower-buds in an erect position; on the flower expanding, they assume the direction called patent, or spreading; a term used to indicate the position between vertical and horizontal; subsequently they assume a horizontal, or what, in botanical language, is called diverging, position. Then, as the peduncles still fall, they become divaricate; that is opposite to spreading, being as much below as that is above the horizontal line. At length they hang almost straight downwards; and by reason of this change from their original position, the peduncles may be said to be refracted, or turned from their first direction.

It will here be seen that even to explain the mere position of a stem or flower, certain terms, the meanings of which have been fixed, are necessary to be known. Were not terms thus agreed

upon, regarding plants generally, descriptions of them could not be written by one person so as to be understood by others. Complaints have sometimes been made against the language used in botany and other sciences, perhaps, not wholly without cause; still, it should be remembered, that to every science belongs an infinite number of objects, all of which must have names; so, also, must the forms, or conditions, under which they exist, be indicated by specific terms. No language contains primitive words to meet fully these wants; and, moreover, the words in common usage have meanings too extensive or indefinite, till fixed by common consent. Hence, the necessity of their being properly understood by every one who would, even verbally, describe a flower, or understand a friend who can do so with propriety.

To meet these circumstances, and that we may render all aid in our power to every reader of this work, a portion of Professor Henslow's Botanical Dictionary with illustrative cuts, shall be combined with the first of next year's numbers, and every subsequent one till the Dictionary be complete.

Ornithogalum refractum was first brought to England from the Royal Berlin Botanic Garden, but, notwithstanding it may be increased with facility, it is but little known. It is a native of grass fields in Hungary, and grows freely in our open borders, delighting in a sandy rich soil. Offsets may be divided in the autumn, or it may be propagated from seeds. These should be sown in pots in the spring, and the seedlings should have frame protection, during their first winter.

PRIM'ULA VERTICILLA'TA.

WHORLED PRIMULA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of Egypt.	Height. 6 inches.	Flowers in March.	Duration, Perennial.	Introduced in 1826.
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No. 855.

Whether from *Primula* being amongst the first flowerers, or first-rate beauties, its name was chosen from *primus*, signifying first, can now only be guessed at. Some, amongst its numerous species, certainly occupy the first consideration of many cultivators; the *Auricula* and the *Polyanthus*, may be quoted as instances, independently of the whole genus having such abundance of admirers.

This handsome species was first sent to the Edinburgh Royal Botanic Garden, from the Royal Garden of Berlin, and is a special favourite with some cultivators of this genus. In its inflorescence it is subject to much variation. Its lower involucre is occasionally without flowers; ours, it will be seen, shows a few; at other times two umbels of flowers will rise above an empty involucre.

When flowered in a frame, and not exposed to showers, it may be said to appear in full dress, the whole plant becoming finely powdered; but if exposed to rain, this exterior embellishment will, of course, be partially destroyed.

It should be potted in a mixture of peat, loam, and sand, and have frame protection in winter.



CAMPAN'ULA GRAN'DIS.

NOBLE BELL-FLOWER.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
OXALIDACEÆ.

Native of Europe ?	Height. 3 feet.	Flowers in June.	Duration. Perennial.	Introduced in 1841.
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No. 856.

Campanula, see No. 130. This plant is called grandis, and it certainly is of noble aspect, deserving the title.

For the contribution of this fine plant we are indebted to those diligent novelty-seekers, the Messrs. Pope and Sons of Handsworth, whose catalogue of hardy herbaceous plants ranks amongst the first in the kingdom. The Campanula pyramidalis is known to most persons as a fine window ornament; and although the new species now introduced to notice is not likely to run to the extent of stem as the pyramidal one always does, still, as its flowers are much finer, and of deeper colour, than those of that plant, it may make a pleasing substitute for it, and be very acceptable to the admirers of the older species. Their general characters bear some resemblance to each other, but our newly-introduced species will demand much less nursing than its lofty compeer.

As far as the last winter's experience has afforded proof, this plant is perfectly hardy, and grows luxuriantly in the borders; admitting a division of its roots for increase.



Cistus purpureus.

5/4



Linari silenifolia.



Oxycoccus campestris.

3/4



Delphinium requienii.

5/4

CISTUS PURPU'REUS.

PURPLE ROCK-ROSE.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
CISTINACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
Levant.	2 feet.	May to July.	Shrub.	in 1815.

No. 857.

For the meaning of the word *Cistus*, see No. 449.

The *Cistus* ranks amongst the very gayest of the shrubby tribe. So prodigal, so profuse of their flowers, are some of its species, that substantial complaint is made against the litter they produce. They unfold them by thousands; spread them like a laundress for a few hours to the sun; and then, careless of their delicacy, fling them to the winds. The morrow comes, and again is the same profusion seen; and again the evening sees the gay destruction of all that morning boasted. We are here reminded of the *Iliad* of Homer, where *Apollo* is made to reflect on mankind; who,

“Like yearly leaves, that now with beauty crown’d,
Smile on the sun; now, wither on the ground.”

Again —

“Another race the following spring supplies,
They fall successive, and successive rise.”

Our present fugitive-flowered little shrub is very ornamental, and bears ordinary winters without protection. It should be planted in a very dry situation; and increased by cuttings, taken soon after midsummer.

LINARIA SILENIFOLIA.

SILENE-LEAVED TOADFLAX.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Armenia.	3 feet.	May to Aug.	Perennial.	in 1819.

No. 858.

The name of this genus has been several times noticed; and the specific name explains itself sufficiently.

A species of *Linaria* was made known many years ago, under the title of *genistæfolia*, a native of Austria and Caucasus, to which the present plant has, by some authors, been referred as a variety. It is retained by Fischer as a distinct species, and as such is known in our gardens; still the difference is rather in its general appearance than in botanical distinction. It is of more rigid upright growth than *genistæfolia*.

The *Linarias* are mostly plants of neat upright habit, and occupying but little room; notwithstanding, as may be expected out of upwards of a hundred species, some are of an opposite habit. *Linaria silenifolia* is a very elegant and upright plant, continuing in flower at least three months of the summer; and, although perfectly hardy, it is now more rarely met with than formerly.

It should be planted in a light soil, in a situation that is rather dry than otherwise, and may be divided in spring or autumn.

Don's Syst. Bot. 4, 523.

OXYTROPIS CAMPESTRIS.

FIELD OXYTROPIS.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Germany.	Height. 6 inches.	Flowers in June & July	Duration. Perennial.	Introduced in 1778.
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No. 859.

This genus is named from the mucronate termination of its keel, as is fully explained under No. 620, of this work.

To the real British botanist, this is a gem. Who amongst us has climbed to the summit of the rocks at the head of Clova, in the Scottish Forfar? here this plant is found in abundance, but very sparingly on any other, even Scottish, mountains. So wedded is it to its own favourite home, that with difficulty can it be coaxed to live in an atmosphere less attenuated. This, however, is not unfrequent with natives of alpine districts. It is neither heat nor cold which constitutes the difference that is offensive to these children of the mountains; but, it may be supposed, and with a fair show of reason, that the difference is chiefly in atmospheric pressure, and a moister surrounding medium.

This plant must be potted in loam, peat, and sand, with plenty of drainers at the bottom of the pots, and some, also, mixed with the soil. It should be kept with the alpines, but not in too shady a situation. Its increase is so slow as rarely to admit of division.

DELPHINIUM REQUIENII.

REQUIEN'S LARKSPUR.

Class.
POLYANDRIA.

Order.
TRIGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of Majorea.	Height. 4 feet.	Flowers in May & June	Duration. Biennial,	Introduced in 1824.
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No. 860.

Delphinium will be recollected as having reference to the dolphin. See No. 403. Requier, whose name is given to this species, was a French botanist, a resident of Avignon.

The Delphinium, which we now figure, is a rather scarce plant; but as it can be propagated from seeds, which it produces in abundance, it will, probably, be better known hereafter. It is a very distinct species from those generally met with in cultivation, which may prove an additional inducement to pay it attention. We were kindly supplied with our specimen for drawing by Mr. Cameron, of the Birmingham Horticultural Society's garden, who recommends its being sown in spring. He observes, that uncertainty attends its flowering in the following summer, if sown in autumn.

We are not informed whether the seeds of this plant possess the qualities of its near ally — the Delphinium staphysagria, or common Stavesacre of commerce; but it is quite probable that it does. From the Stavesacre is obtained an akaloid, called Delphinia.

We have previously hinted at the potent properties

which have been discovered in vegetables; and the skill of the chemist is daily bringing to light others, of which no conception had till lately been formed. The first vegetable alkaloid was discovered by a German, in 1803, being that from opium called morphia — a valuable addition to our Pharmacopœia. For fifteen years the discovery met but little attention, till other concentrated alkaline substances were prepared; as quinine, from Peruvian bark; Atropin, from *Atropa belladonna* (No. 105); Aconitin, from the *Aconitum napellus* (No. 210); and many others, some of which are esteemed as valuable remedies.

It is not wholly unimportant that every person moving in a respectable sphere of society should possess some knowledge of the objects with which he is frequently brought in contact. Ignorance now-a-days is far less excusable than formerly. Therefore that our young readers may not be quite uninformed regarding the means employed by the chemist for the concentration of the active ingredients which are contained in vegetables, we will give Berzelius's method of obtaining delphinia. Digest the seeds of Stavesacre in water acidulated with sulphuric acid. Precipitate the acid liquid by an alkali, or by magnesia. Wash and dry the precipitate, and digest it in boiling alcohol, which will dissolve the delphinia. Treat the solution with ivory black, filter and precipitate the delphinia by ammonia. It has then the form of a jelly. Being dissolved in alcohol, and obtained by evaporation, it assumes the form of a crystalline powder, which becomes opaque when dried.



Roscoe purpurea

93



Amelanchier vulgaris

94



Clematis viticella

95



Daphne Pontica

96

ROSCOEIA PURPUREA.

PURPLE ROSCOEA.

Class.
MONANDRIA.

Order.
MONOGYNIA.

Natural Order.
SCITAMINACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Nepal.	15 inches.	July & Aug.	Perennial.	in 1820.

No. 861.

This genus was established by the late Sir James Edward Smith, formerly president of the Linnean Society, in honour of his distinguished friend, William Roscoe, Esq. F. L. S., a man of eminent talents and virtue.

The plant which we now figure, it will be seen by the plate of it, is of very ornamental character; the protection of the stove, on its introduction to this country, was thought indispensable to its proper management; it has, however, proved quite hardy under ordinary circumstances. To secure success in its culture, strict attention should be paid to the dryness of the situation in which it is planted, a condition which cannot be too much insisted on in the culture of all plants of doubtful hardiness; and we would advise that moss or tan be put on the border in winter, over the roots. If kept in a pot, the soil should be a mixture of peat, loam, and sand. It may be divided for increase; or raised from seeds, which should be sowed in a cold frame, and they will blossom in the second season. Reference to "Acclimatisation," in the Auctarium, would here be useful.

AMELAN'CHIER VULGA'RIS.

COMMON AMELANCHIER.

Class.
ICOSANDRIA.

Order.
DI-PENTAGYNIA.

Natural Order.
ROSACEÆ.

Native of S. Europe.	Height. 6 feet.	Flowers in Apr. & May.	Duration. Perennial.	Cultivated in 1596.
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No. 862.

Amelanchier is a word to which we cannot attach any specific meaning. It is said to be the Savoy name of the Medlar; whilst, according to some authors, it has been applied by the Austrians to a species of Whortleberry. The shrub which now bears the name has received several other names from different authors; having been by some thought to be identical with *Pyrus*, whilst others consider it a *Sorbus*, others a *Mespilus*, &c. The distinctive characters of Amelanchier rest on a slender basis, but it is desirable that no further change be made.

This is a very ornamental shrub, or small tree, whether in fruit or in flower, and it usually produces an abundance of both. The leaves are at first covered with a cottony pubescence, but this gradually disappears as the foliage attains its full growth. Many of the species of Hawthorn, (*Cræægus*) even the common, of our hedges, are highly pleasing objects when in flower, but they form round and solid masses, whilst the Amelanchier, with its profusion of flowers, has more of the picturesque — is more spreading, tortuous, and

irregular. We have rarely seen it exceeding ten or twelve feet high, but Mr. Loudon, in his admirable *Arboretum Britannicum*, mentions its being twenty feet high, in his Grace the Duke of Northumberland's garden, at Syon.

The fruit of the *Amelanchier vulgaris* is considered as eatable, and when ripe is soft, somewhat sweet, and of rather pleasant flavour than otherwise. As it ripens in August it is superceded by other fruits, but were it in perfection at Christmas, it may claim a place with the Medlar and the Service-berry, at least where these fruits obtain a place, for notwithstanding the great partiality which many of those persons who are acquainted with the Medlar, have for it, there seems not to be one in a hundred who knows the Service-berry, a fruit indigenous to England; and although small, esteemed by many, as of superior flavour to the Medlar. It is sometimes offered for sale in the country; in the market of the city of Worcester, for instance, it may often be met with in the autumn.

The care required in the cultivation of the *Amelanchier vulgaris* is of the simplest sort, for it will grow in any common soil, preferring a situation that is open and rather dry. It is propagated by several means, but usually by grafting on the Hawthorn; and the Quince also forms a good stock for it. It may be increased by layering also, but it will be necessary to tongue the layers on putting them down, to facilitate their rooting. It is said to be sometimes raised from seeds; and that when so propagated, suckers will be thrown up, which may be taken off for further increase.

CLEMATIS VITICELLA.

LADIES' BOWER.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of Spain.	Height. 20 feet.	Flowers in June to Sep.	Duration. Perennial.	Cultivated in 1569.
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No. 863.

The name Clematis, from the Greek, was first adopted for an European plant, by Matthiolus, the celebrated Italian physician and botanist of the sixteenth century. Gerard, in his explicit style, says "It is called in Greek KLEMATIS; in Latine Ambuxum, in English you may call it Ladies' Bower, which I take from his aptnesse in making Arbors, Bowers, and shady couertures in gardens." The trivial name, viticella was given by Linneus, from its twiggy vine-like growth.

This ornamental old inhabitant of English and continental gardens, has both single and double flowers, of several shades, varying from red to a deep dullish purple. They are comparatively unknown in country gardens, for which reason we now introduce the present species to notice, and can but accompany the introduction with a recommendation that those who have hitherto neglected the various species of Clematis should no longer deprive themselves of the pleasure of growing them. They are best suited for spreading over a trellis, but they may be trained upon a wall, a pole, or other support.

The cultivation of the Clematis was as well known a century or two ago as at the present day. The most usual error is the neglect of cutting back the plants in winter. When suffered to continue half pruned, or not pruned at all, the stems become bare, straggling, and unsightly; and not a little discreditable to the gardener and the proprietor — whether these personages move as separate individuals, or enjoy their existence in one and the same person.

“All the varieties of purple Ladies’ Bower are propagated by laying down their branches; for although their single flowers sometimes produce seeds in England, yet as these seeds, when sown, generally remain a whole year in the ground before they vegetate, the other, being the more expeditious method of increasing these plants, is generally practised. But in order to succeed, these layers should be laid down in July, soon after their first shoots, for it is these young branches of the same year, which freely take root; but as these are very tender, there should be great care taken not to break them in the operation; therefore those branches from which these shoots were produced, should be brought down to the ground, and fastened, to prevent their rising; then the young shoots should be laid into the earth, with their tops raised upright, three or four inches above the ground: and after the layers are placed down, the surface of the ground should be covered with moss to prevent the ground drying, which will encourage the striking of roots from the young shoots.”

DAPHNE PONTICA.

PONTIC DAPHNE.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
THYMELACEÆ.

Native of Pontus.	Height. 4 feet.	Flowers in Apr. & May.	Duration, Perennial.	Introduced in 1759.
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No. 864.

Daphne, a name well known in fable, but which originated, it seems probable, as the name of the Laurel. (See No. 256.)

The Daphne Pontica is a hardy evergreen shrub, with handsome foliage, but with flowers possessing no gaiety. Plants, like men, generally have some redeeming quality, and we find that our Daphne has flowers that are fragrant, if not gay. Beside the variety of Daphne Pontica now figured, there are two others; the one with flowers of a dull red colour; and the other with green flowers and variegated leaves. Each of them hardy.

This shrub grows freely in any common garden soil, and is readily increased by layers, or by grafting on the Daphne laureola, which is the favourite stock for grafting with all the more rare kinds of Daphne. The stocks are usually kept in pots, are headed down, in April, or the beginning of May, and then grafted, and afterwards placed in a close and shaded frame, for three months, before being fully exposed to the air. Plants thus obtained, it should be known, are shorter lived than those raised from layers.

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